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SQUIRE'S COMPANION
TO THE
BRITISH PHARMACOPŒIA

FOURTEENTH EDITION
1886

C. C. McCard M. D.
San Francisc
188

COMPANION

TO THE LATEST EDITION OF THE

BRITISH PHARMACOPŒIA.

FOURTEENTH EDITION.

COMPANION

TO THE LATEST EDITION OF THE

BRITISH PHARMACOPŒIA,

COMPARING THE STRENGTH OF ITS VARIOUS PREPARATIONS
WITH THOSE OF THE
UNITED STATES, AND OTHER FOREIGN PHARMACOPŒIAS.
TO WHICH ARE ADDED
NOT OFFICIAL PREPARATIONS, AND
PRACTICAL HINTS ON PRESCRIBING.

BY
PETER SQUIRE.

Fourteenth Edition.

REVISED
BY
PETER WYATT SQUIRE, F.L.S., F.C.S.
AND
ALFRED HERBERT SQUIRE,
JOINTLY CHEMISTS IN ORDINARY ON THE ESTABLISHMENT OF THE QUEEN;
CHEMISTS IN ORDINARY TO H.R.H. THE PRINCE OF WALES.

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S77
1886

In Memory of

SIR JAMES CLARK, BART., K.C.B., M.D., F.R.S.,

To whom, by his permission, the former Editions were dedicated, and whose death, at the mature age of 82, *was lamented by her Majesty and the whole of the Royal Family; and by the Medical Profession, of which he was one of the brightest ornaments.*

He was not only a wise physician, but a man of sound judgment and quick perception. His hand was ever ready to help the unfortunate and to assist the deserving; and some who have risen to the highest professional eminence owe their success in a great measure to his counsel and advice during their early career.

He was much interested in Pharmacy, and through his influence the Pharmaceutical Society sent its delegate to take part in the formation of the British Pharmacopœia.

43994

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PREFACE

TO FIRST EDITION.

This Volume has been written to supply a want which has been generally felt since the publication of the British Pharmacopœia.

The weight which has been adopted by the Medical Council is the avoirdupois pound; it is divided into sixteen ounces, each of which contains 437·5 grains. This weight presents many difficulties in practice, as many of the ingredients have to be expressed in grains. The quantities of the several preparations made at different dispensing establishments will vary according to the amount of business done, so that a calculation has to be made in almost every case. This is no easy matter. If we take for example the formula for Compound Tincture of Benzoin, and wish to prepare half a gallon, it will be necessary to multiply the number of grains of each ingredient ordered by 4, and to divide the number thus obtained by 437·5, to reduce it to ounces. In these cases highly inconvenient weights are obtained, consisting for the most part of ounces and odd numbers of grains. To remedy this defect I have, as far as practicable, expressed the formulæ in parts, which may be regarded either as pounds, quarter-pounds, or ounces, or indeed any weights, English or foreign. The liquids, however, are always directed to be measured: I have therefore placed at the top of each page this general direction, "Solids by weight, liquids by measure."

It must be remembered, then, that should the parts be considered to represent ounces, the fluid ounce must be used for liquids, the avoirdupois ounce for solids. On the Continent every substance, liquid and solid, is directed to be weighed, and this has caused one of the chief difficulties I have had to encounter. The reduction to the English method has been effected in every case as accurately as possible, but as the specific gravity of each liquid has entered into the calculation, I must claim indulgence for any error which may have crept in.

Although the American weights, like those of the late London and Edinburgh Pharmacopœias, are troy, the pint is only sixteen avoirdupois ounces; this has caused an additional difficulty in obtaining an accurate comparison.

Looking at the anomalous condition of the weights and measures in England and America, we can only hope that Parliament will shortly establish some scheme by which our system may be made to harmonize, and rendered easily comparable with those of foreign countries.

The object of referring to the preparations of foreign Pharmacopœias in the present Work, is to enable prescribers to regulate the prescriptions of patients going abroad, where preparations similar in name but different in composition may be employed. For this purpose the last editions of the French, Belgian, Prussian, Austrian, and United States Pharmacopœias have been taken. This comparison may perhaps even be useful, should foreign countries attempt to assimilate their Pharmacopœias to the British or those of other countries. A similar comparison of the three Pharmacopœias which I made some years ago, was found so useful in the preparation of the British Pharmacopœia, that each member of the Committee was furnished with a copy.

The doses are given to the best of my own judgment in ma cases, and in others from the most accredited authorities; and have stated the solubility of substances in different liquids in th cases where the information seemed likely to be useful. This enable prescribers to see at once how much the liquid present will take up, and the greater or less solubility in different fluids will indicate the best mode of prescribing.

I have also explained the action of the Tests given in the Pharmacopœia for ascertaining the purity of the substances employed; indicating in each case the particular impurity which may be suspected.

In arranging the Work, I have thought it best to class each preparation under the head of the chief drug which it contains; by this plan a prescriber who wishes to employ any particular substance will find all the preparations made from it, and see at a glance their composition and the proportions of the ingredients.

In addition to this will be found in the alphabetical order a list of preparations in each group, such as Infusions, Tinctures, etc., where the relative proportions of the active ingredients are also shown.

The medicinal properties of the respective preparations have been collated from the best authorities. I am indebted to Dr. Sieveking for various suggestions as the Work has passed through the press; and have ventured to add some hints as to the best mode of prescribing, which have from time to time occurred to me.

As the arrangement of this Volume is strictly alphabetical, an Index has been thought unnecessary.

In conclusion, I may say, that knowing something of the wants of both Pharmaceutists and Prescribers, I have endeavoured to make the book as practical as possible, and I trust that the labour bestowed upon it will not be without some result.

THE AUTHOR.

277, Oxford Street,
June, 1864.

PREFACE

TO SECOND EDITION.

THE very flattering reception given to the First Edition of this work, and the fact that in one month after its publication more than three-fourths of the issue had been sold by the Publishers, have induced the Author to revise with great care the several parts of the work.

In the present Edition the medicinal properties and doses have been re-examined, the references to Foreign Pharmacopœias made more complete by the addition of the names employed in such Pharmacopœias, and although much new matter has been added, the contents of the British Pharmacopœia have been kept clear and distinct, by placing over every preparation not contained in it, the words "Not Officinal."

To this latter class there have been considerable additions made.

The proportions and doses are now annexed to all the groups, and an Index has been supplied, combined with a posological table. In short, no pains have been spared to put the information in such a form as to be very easy of reference both to the Prescriber and Dispenser.

The Author begs to thank the numerous friends who have taken an interest in the work, for their many valuable suggestions.

277, OXFORD STREET,
October 1, 1864.

PREFACE

TO FOURTEENTH EDITION.

THE first edition of the "Companion" was written by Peter Squire in 1864, and he took an active part in each revision up to the time of his death in 1884.

The work has now been revised with the British Pharmacopœia by his sons, who had assisted him with previous editions.

The words NEW, ALTERED, MODIFIED, have been used to mark the changes which have taken place in the official work.

Most of the substances and preparations which now appear in the British Pharmacopœia for the first time, have been in use for some years; in these cases the edition of the "Companion" in which they were first mentioned has been noted.

Since the last edition of this work, Belgium, France, Germany, and the United States of America, have issued new editions of their Pharmacopœias; these are compared with the new British Pharmacopœia, some of their preparations are introduced as Not-Official, and some tests which might be useful have been extracted.

Much new matter has been introduced, such as the percentage of ash obtained from commercial samples of drugs, and the specific gravity of different samples of essential oils; some of the tests have been criticised, as those of Acidum Chromicum, Amygdalæ Oleum, Æther Aceticus, Elaterium, Lupulinum, Sevum Preparatum, and others.

P. W. SQUIRE.
A. H. SQUIRE.

413, OXFORD STREET,
April 20, 1886.

THE WEIGHTS AND MEASURES OF THE BRITISH PHARMACOPŒIA, AT THE TEMPERATURE OF 60° FAHRENHEIT.

Weights.

The Avoirdupois pound = 16 oz. = 7000 grs.
1 oz. = 437·5 grs.
1 gr. = 1 gr.

Measures.

The Imperial gallon contains 277·274 cubic inches of distilled water at 60° F.

C	1 gallon	= 8 pints,	weighing	10 pounds,	contains	76,800 minims.
O	1 pint	=20 fluid ounces	,,	1¼ ,,	,,	9,600 ,,
fl. oz.	1 fluid ounce	= 8 fluid drachms	,,	437·5 grains	,,	480 ,,
fl. dr.	1 fluid drachm	=60 minims	,,	54·68 ,,	,,	60 ,,
♏	1 minim		,,	·91 grain	,,	1 minim.

It must be remembered that the minim is less than the grain measure; hence, although in Tinct. Opii there is 1 in 13½ grain-measures, there is only 1 in 14⅔ minims.

To find the number of gallons any rectangular vessel will hold, multiply the length in inches by the breadth, and the product by the depth in inches, then divide the total by 277·274, which is the number of cubic inches contained in the gallon.

Graduated measures require testing before use, which is easily done with good weights and scales, and distilled water. Every fluid ounce ought to weigh an ounce avoirdupois, but there are two lines on the surface of a liquid; the upper one is that of capillary attraction to the sides of the vessel; the lower one the exact surface of the fluid. This should be on a line with the eye to measure accurately.

The Pharmacopœias of Austria, Belgium, Denmark, France, Germany, Russia, and the United States give the formulas in parts by weight; in some instances the gramme is indicated as the unit.

The British Pharmacopœia still gives the formulas in weights and measures; the proportions are also expressed in parts, but the two systems do not always agree. Liquids are as a rule ordered by measure and fluid parts, but there is no uniformity in this: for instance, Olive Oil is by measure in Unguentum Hydrargyri Nitratis, but by weight in Unguentum Hydrargyri Composita; Glycerine is by measure in the Glycerines, but by weight in Linimentum Iodi; Glacial Acetic Acid is by measure in Acetum Cantharidis and Mistura Creasoti, but by weight in Linimentum Terebinthinæ Aceticum; Castor Oil is by measure in Pilula Hydrargyri Subchloride Composita, but by weight in Collodium Flexile.

The British Pharmacopœia is used in India and all the British colonies.

WEIGHTS AND MEASURES EMPLOYED FOR MEDICINE IN ENGLAND SCOTLAND, AND IRELAND.

Formerly the wine measure of 16 oz. to the pint, and the apothecaries' or troy weight were used for medicine.

We have now the imperial measure of 20 oz. to the pint, and the imperial pound of 16 oz., with 437·5 grs. to the oz., as ordered in the British Pharmacopœia, and the Act of Parliament insists that all sales shall be made by this imperial standard.

Permission has, however, been given to sell drugs by retail by the apothecaries' weight (troy weight).

The author has thought that, to avoid confusion, he had better confine himself in all the formulas to the oz. (=437·5 grs.) and grain for weight, and to the fluid oz. (weighing 437·5 grs.), fluid drachm, and minim for measure.

The British, published in 1885, is in this work compared with tl latest editions of the foreign Pharmacopœias, which are as follows :-

Austrian	published in		1869
Belgian	,,	,,	1885
Danish	,,	,,	1869
French	,,	,,	1884
German	,,	,,	1882
Russian	,,	,,	1880
United States	,,	,,	1882

and are thus abbreviated—Austr., Belg., Dan., Fr., Ger., Russ., U.

The following is a table of comparisons of troy and avoirdupo weights :—

Troy.			Avoirdupois.							
12	ounces	equal	13	ounces	and	73	grains	=	5760	grains.
11	,,	,,	12	,,	,,	30	,,	=	5280	,,
10	,,	,,	10¾	,,	,,	97	,,	=	4800	,,
9	,,	,,	9¾	,,	,,	54½	,,	=	4320	,,
8	,,	,,	8¾	,,	,,	12	,,	=	3840	,,
7	,,	,,	7½	,,	,,	79	,,	=	3360	,,
6	,,	,,	6½	,,	,,	36½	,,	=	2880	,,
5	,,	,,	5¼	,,	,,	103	,,	=	2440	,,
4	,,	,,	4¼	,,	,,	61	,,	=	1920	,,
3	,,	,,	3¼	,,	,,	18	,,	=	1440	,,
2	,,	,,	2	,,	,,	85	,,	=	960	,,
1	,,	,,	1	,,	,,	42½	,,	=	480	,,

EQUIVALENTS OF ENGLISH WEIGHTS TO FRENCH GRAMMES.

1 pound avoirdupois	7000 grains	or	16 ounces	=	453·592	French	grammes.
	6562·5	or	15	=	425·2425	,,	,,
	6125	or	14	=	396·8925	,,	,,
	5687·5	or	13	=	368·5435	,,	,,
	5250	or	12	=	340·1935	,,	,,
	4812·5	or	11	=	311·8445	,,	,,
	4375	or	10	=	283·495	,,	,,
	3937·5	or	9	=	255·1455	,,	,,
	3500	or	8	=	226·796	,,	,,
	3062·5	or	7	=	198.4465	,,	,,
	2625	or	6	=	170·097	,,	,,
	2187·5	or	5	=	141·7475	,,	,,
	1750	or	4	=	113·398	,,	,,
	1312·5	or	3	=	85·0485	,,	,,
	875	or	2	=	56·699	,,	,,
1 ounce,	437·5	or	1	=	28·3495	,,	,,
	218·75	or	½	=	14·17475	,,	,,
	109·37	or	¼	=	7·08737	,,	,,
	15·43			=	1		
	1·543			=	·1, a decigramme.		
1 grain,	1			=	·0648		
	·15 or ⅐ nearly			=	·01, a centigramme.		
	·015 or 1/65 nearly			=	·001, a milligramme (nearly).		

MEASURES, EQUIVALENTS OF FRENCH GRAMMES TO ENGLISH WEIGHTS.

1 Litre	=	1 kilogramme,	1000 French grammes	=	35 ounces	and	120	grains.
			900	=	31	and	326¾	,,
			800	=	28	and	96	,,
			700	=	24	and	302¾	,,
			600	=	21	and	72	,,
			500	=	17	and	278¾	,,
			400	=	14	and	48	,,
			300	=	10	and	254¾	,,
			200	=	7	and	24	,,
1 Decilitre	=	1 hectogramme,	100	=	3	and	230¾	,,
			90	=	3	and	76⅖	,,
			80	=	2	and	359⅗	,,
			70	=	2	and	205⅕	,,
			60	=	2	and	51	,,
			50	=	1	and	334	,,
			40	=	1	and	179¾	,,
			30	=	1	and	25½	,,
			20	=			308⅗	,,
1 Centilitre	=	1 decagramme,	10	=			154⅓	,,
			5	=			77⅙	,,
1 Millilitre	=	*1 gramme,	1	=		nearly	15⅖	,,
			·5	=		,,	7¾	,,
		1 decigramme,	·1	=		,,	1½	,,
			·05	=		,,	¾	,,
		1 centigramme,	·01	=		,,	⅐	,,
			·005	=		,,	1/13	,,
		1 milligramme,	·001	=		,,	1/65	,,

---

* The weight of a cubic centimetre of water at its greatest density, viz. at the temperature of 4° C. or 39·2° F.

NOTE.—In French, as in German and Russian dispensing, all liquids are weighed, not measured.

METRICAL MEASURES.

RELATION OF THE METRICAL MEASURES TO THE MEASURES OF THE BRITISH PHARMACOPŒIA.

1 Millimetre = 0·03937 inch.
1 Centimetre = 0·39371 „
1 Decimetre = 3·93708 inches.
1 Metre = 39·37079 „

1 Cubic Centimetre = 15·432 grain-measures.
1 Litre = 35¼ fl. oz. and 11 mins. or 15432·348 grain-measures.

LENGTH.

1 Millimetre = the thousandth part of one metre, or 0·001 metre.
1 Centimetre = the hundredth „ 0·01 „
1 Decimetre = the tenth part „ 0·1 „
1 Metre = the ten-millionth part of a quarter of the circumference of the earth = 39·37079 inches.

1 Line = $\frac{1}{12}$ inch.
1 Inch = $\frac{1}{12}$ foot.
12 Inches = 1 foot.
36 „ = 3 feet = 1 yard.
Length of pendulum vibrating seconds of mean time in the latitude of London, in a vacuum at the level of the sea . } 39·1393 inches.

It is remarkable that the English and French standards, taken from such different sources, should so nearly agree:—

The English, from the length of a pendulum vibrating seconds of mean time; from which the yard (36 inches) is computed . . } 39·1393.

The French being the ten-millionth part of a quarter of the earth's meridian, and called a metre . . . . } 39·37079.

CAPACITY.

1 Millilitre = 1 cubic centimetre, or the measure of 1 gramme of water.
1 Centilitre = 10 „ centimetres „ 10 grammes „
1 Decilitre = 100 „ „ „ 100 „ „
1 Litre = 1000 „ „ „ 1000 „ (1 kilo.)

TABLE OF COMPARISON OF THE FAHRENHEIT WITH THE CENTIGRADE* AND RÉAUMUR'S THERMOMETER.

Fahr.	Cent.	Réau.	Fahr.	Cent.	Réau.	Fahr.	Cent.	Réau.
212	100	80	136·4	58	46·4	60·8	16	12·8
210·2	99	79·2	134·6	57	45·6	59	15	12
208·4	98	78·4	132·8	56	44·8	57·2	14	11·2
206·6	97	77·6	131	55	44	55·4	13	10·4
204·8	96	76·8	129·2	54	43·2	53·6	12	9·6
203	95	76	127·4	53	42·4	51·8	11	8·8
201·2	94	75·2	125·6	52	41·6	50	10	8
199·4	93	74·4	123·8	51	40·8	48·2	9	7·2
197·6	92	73·6	122	50	40	46·4	8	6·4
195·8	91	72·8	120·2	49	39·2	44·6	7	5·6
194	90	72	118·4	48	38·4	42·8	6	4·8
192·2	89	71·2	116·6	47	37·6	41	5	4
190·4	88	70·4	114·8	46	36·8	39·2	4	3·2
188·6	87	69·6	113	45	36	37·4	3	2·4
186·8	86	68·8	111·2	44	35·2	35·6	2	1·6
185	85	68	109·4	43	34·4	33·8	1	0·8
183·2	84	67·2	107·6	42	33·6	32	0	0
181·4	83	66·4	105·8	41	32·8	30·2	— 1	— 0·8
179·6	82	65·6	104	40	32	28·4	— 2	— 1·6
177·8	81	64·8	102·2	39	31·2	26·6	— 3	— 2·4
176	80	64	100·4	38	30·4	24·8	— 4	— 3·2
174·2	79	63·2	98·6	37	29·6	23	— 5	— 4
172·4	78	62·4	96·8	36	28·8	21·2	— 6	— 4·8
170·6	77	61·6	95	35	28	19·4	— 7	— 5·6
168·8	76	60·8	93·2	34	27·2	17·6	— 8	— 6·4
167	75	60	91·4	33	26·4	15·8	— 9	— 7·2
165·2	74	59·2	89·6	32	25·6	14	—10	— 8
163·4	73	58·4	87·8	31	24·8	12·2	—11	— 8·8
161·6	72	57·6	86	30	24	10·4	—12	— 9·6
159·8	71	56·8	84·2	29	23·2	8·6	—13	—10·4
158	70	56	82·4	28	22·4	6·8	—14	—11·2
156·2	69	55·2	80·6	27	21·6	5	—15	—12
154·4	68	54·4	78·8	26	20·8	3·2	—16	—12·8
152·6	67	53·6	77	25	20	1·4	—17	—13·6
150·8	66	52·8	75·2	24	19·2	— 0·4	—18	—14·4
149	65	52	73·4	23	18·4	— 2·2	—19	—15·2
147·2	64	51·2	71·6	22	17·6	— 4	—20	—16
145·4	63	50·4	69·8	21	16·8	— 5·8	—21	—16·8
143·6	62	49·6	68	20	16	— 7·6	—22	—17·6
141·8	61	48·8	66·2	19	15·2	— 9·4	—23	—18·4
140	60	48	64·4	18	14·4	—11·2	—24	—19·2
138·2	59	47·2	62·6	17	13·6	—13	—25	—20

Reductions from one scale to another are easily made by the following calculation :—

Fahrenheit to Centigrade, deduct 32, multiply by 5, and divide by 9.
Centigrade to Fahrenheit, multiply by 9, divide by 5, and add 32.
Réaumur to Fahrenheit, multiply by 9, divide by 4, and add 32.

---

* Celsius first proposed this scale, which is also called "Celsius."

TABLE COMPARING THE PHARMACEUTICAL HYDROMETER WITH BEAUMÉ'S FOR SPIRIT,

INDICATING AT THE SAME TIME THE SPECIFIC GRAVITY AND PERCENTAGE ALCOHOL BY WEIGHT AT A TEMPERATURE OF 15·5° CENTIGRADE = 60° FAHRENHEI

Pharmaceutical.	Beaumé's.	Specific gravity.	Percentage of absol Alcohol (by weigh
0	10	1·000	0·
1	11	0·993	4·0
2	12	0·986	7·8
3	13	0·980	13·0
4	14	0·973	18·7
5	15	0·967	23·7
6	16	0·960	28·6
7	17	0·954	32·4
8	18	0·948	35·7
9	19	0·942	38·9
10	20	0·935	42·0
11	21	0·929	44·8
12	22	0·924	47·5
13	23	0·918	50·0
14	24	0·912	52·6
15	25	0·906	55·3
16	26	0·901	57·7
17	27	0·895	60·2
18	28	0·890	62·6
19	29	0·884	64·9
20	30	0·879	67·0
21	31	0·874	69·1
22	32	0·868	71·3
23	33	0·863	73·5
24	34	0·858	75·8
25	35	0·853	77·9
26	36	0·848	80·0
27	37	0·843	82·0
28	38	0·838	84·2
29	39	0·833	86·2
30	40	0·829	88·2
31	41	0·824	89·2
32	42	0·819	90·3
33	43	0·815	92·5
34	44	0·810	94·3
35	45	0·806	95·6
36	46	0·801	97·3
37	47	0·797	98·6
38	48	0·793	100·0
39	49	0·788	
40	50	0·784	
41	51	0·780	
42	52	0·776	
43	53	0·771	
44	54	0·767	
45	55	0·763	
46	56	0·759	
47	57	0·755	
48	58	0·752	
49	59	0·748	
50	60	0·744	
51	61	0·740	

BEAUMÉ'S HYDROMETER COMPARED WITH THE SPECIFIC GRAVITY OF LIQUIDS HEAVIER THAN WATER.

1·000 BEING TAKEN AS THE SPECIFIC GRAVITY OF DISTILLED WATER AT 15·5° CENTIGRADE = 60° FAHRENHEIT.

Beaumé.	Sp. G.
0	1·000
1	1·007
2	1·014
3	1·021
4	1·028
5	1·036
6	1·043
7	1·051
8	1·058
9	1·066
10	1·074
11	1·082
12	1·090
13	1·098
14	1·107
15	1·115
16	1·124
17	1·133
18	1·142
19	1·151
20	1·160
21	1·169
22	1·179
23	1·188
24	1·198
25	1·208
26	1·218
27	1·229
28	1·239
29	1·250
30	1·261
31	1·272
32	1·283
33	1·294
34	1·306
35	1·318
36	1·330
37	1·342
38	1·355
39	1·367
40	1·380
41	1·394
42	1·407
43	1·421
44	1·435
45	1·449
46	1·464
47	1·479
48	1·494
49	1·510
50	1·526
51	1·542
52	1·558
53	1·575
54	1·593
55	1·610
56	1·628
57	1·647
58	1·666
59	1·685
60	1·705
61	1·725
62	1·746
63	1·767
64	1·789
65	1·811
66	1·834
67	1·857
68	1·882
69	1·906
70	1·932
71	1·958
72	1·984
73	2·011
74	2·040
75	2·069
76	2·099
77	2·130

Specific Gravity of Syrups, &c., may be tested with a ten-ounce measure. Ten measured ounces of simple syrup should weigh nearly thirteen ounces and one-third, representing the sp. g. 1·330.

In the formulas for the Syrups of the British Pharmacopœia they are directed to be made to a given weight, and the specific gravity is also stated. It can be easily ascertained what any of these weights would measure, by dividing the weight by the specific gravity; thus Syrupus Scillæ is directed to weigh 50 oz., and the specific gravity to be 1·330, then 1·330)50·000(37·5, or 37½ ounces by measure.

MATERIA MEDICA TABLE

B. P. Name.	Obtained from.	Natural Order.	Habitat.
Acacia	Acacia, Senegal, and other species	Leguminosæ	Kordofan, in Eastern Africa
Aconitum	Aconitum Napellus	Ranunculaceæ	Germany or Britain
Adeps	Sus scrofa	Pachydermata	Domesticated everywhere
Aloe Barbadensis	Aloe vulgaris	Liliaceæ	Barbadoes and Dutch West Indian Islands
Aloe Socotrina	Aloe Perryi and other species	Liliaceæ	Socotra (shipped by way of Bombay)
Ammoniacum	Dorema Ammoniacum	Umbelliferæ	Persia and the Punjaub
Amygdala Amara	Prunus Amygdalus	var. amara } Rosaceæ	Mogadore
Amygdala Dulcis	Prunus Amygdalus	var. dulcis	Malaga
Amylum	Triticum Sativum (wheat) Zea Mays (maize) Oryza Sativa (rice)	Graminaceæ	Cultivated in various parts of the world
Anethi Fructus	Peucedanum graveolens	Umbelliferæ	England, middle and southern Europe
Anisi Oleum	Pimpinella Anisum Illicium Anisatum	Umbelliferæ Magnoliaceæ	Distilled in Europe Distilled in China
Anthemidis Flores	Anthemis nobilis	Compositæ	Britain, cultivated
Armoraciæ Radix	Cochlearia Armoracia	Cruciferæ	Britain
Arnicæ Rhizoma	Arnica montana	Compositæ	Mountainous parts of middle and southern Europe
Asafœtida	Ferula Narthex, and probably other species	Umbelliferæ	Afghanistan and Punjaub
Aurantii Flores Aurantii Cortex Aurantii Fructus	Citrus vulgaris	Aurantiaceæ	South of Europe
Balsamum Peruvianum	Myroxylon Pereiræ	Leguminosæ	Salvador, in Central America
Balsamum Tolutanum	Myroxylon Toluifera	Leguminosæ	New Granada
Belæ Fructus	Ægle Marmelos	Aurantiaceæ	Malabar and Coromandel
Belladonna	Atropa Belladonna	Atropaceæ	(Leaves) Britain, (Root Britain, Germany
Benzoinum	Styrax Benzoin and other species	Styraceæ	Siam and Sumatra
Buchu Folia	Barosma betulina crenulata serratifolia	Rutaceæ	Cape of Good Hope
Caffeina	Camellia Thea Coffea Arabica	Ternstromiaceæ Cinchonaceæ	China, Japan, and India. Cultivated through tropics (native of sinia)

OF THE ORGANIC KINGDOM.

Parts used.	Preparations into which it enters.
Gum (exuded from stem & branches,	Mist. Cretæ; Mist. Guaiaci; Mucilago Acaciæ; P Amygdalæ Co. and Pulv. Tragacanth Co. All Trochi
Fresh leaves and flowering tops, and dried root	Fresh leaves and flowering tops = Extract. Root = Linimentum, Tinctura, and Aconitina.
Internal fat of the abdomen . .	Adeps Benzoatus; Empl. Canthar.; Unguenta Iodi, I drargyri, Hydrarg. Nitratis, and Terebinthinæ.
Inspissated juice of the leaf . .	Aloin; Enema Aloes; Ext. Aloes Barb.; Pil. Aloes Bar Pil. Aloes et Ferri; Pil. Cambogiæ Comp.; Pil. Coloc thidis Co.; Pil. Colocynthidis et Hyoscyami.
Inspissated juice of the leaf . .	Aloin; Decoct. Aloes Co.; Enema Aloes; Ext. Al Socotrinæ; Ext. Coloc. Co.; Pil. Aloes et Asafœti Pil. Aloes et Myrrhæ; Pil. Aloes Socot.; Pil. Rhei C Tinct. Aloes; Tinct. Benzoini Co.; Vinum Aloes.
Gum-resinous exudation from stem	Emplastrum Ammoniaci c. Hydrargyro; Emplast. Galba Mistura Ammoniaci; Pilula Scillæ Co.; Pil. Ipecac. c. Sci
Oil of the seed	Oleum Amygdalæ; Ol. Phosphoratum; Unguent. Ceta Ung. Simplex.
Seed and the oil of the seed . .	Oleum Amygdalæ; Pulvis Amygdalæ Compositus; Mist Amygdalæ.
Starch	Glycerinum Amyli; Mucilago Amyli; Pulvis Tragacan Co.; Suppos. Acid Tannici c. Sapone; Suppos-Morph c. Sapone.
Fruit	Aqua Anethi; Oleum Anethi.
Oil from the fruit	Ess. Anisi; Aqua Anisi; Oleum Anisi; Tinct. Camph. Tinct. Opii Ammoniata.
Single and double flower-heads or capitula (dried) . . .	Extractum, Infusum, Oleum Anthemidis.
Fresh root	Spiritus Armoraciæ Compositus.
Dried rhizome and rootlets . . .	Tinctura Arnicæ.
Gum-resin	Enema Asafœtidæ; Pil. Aloes et Asafœtidæ; Pil. Asafœt Co.; Spiritus Ammoniæ Fœtidus; Tinctura Asafœtida
Flowers	Aqua Aurantii Floris.
Dried outer part of the rind .	Inf. Aurantii, Inf. Aurantii Comp.; Inf. Gentian. Con Tinct. Aurantii; Tinct. Gentian. Comp.; Tinct. Cincl Comp.; Spirit. Armoraciæ Comp.
Ripe fruit	Tinct. Aurantii Recentis.
Balsam, from the trunk.	
Balsam, from the trunk	Syrupus Tolutanus; Tinct. Benzoini Co.; Tinct. Toluta Pil. Phosphori.
Dried half-ripe fruit	Extractum Belæ Liquidum.
Leaves, with or without branches, and root	Leaves and branches = Extract. Belladonnæ; Succus B donnæ; Leaves = Tinct. Belladonnæ. Root = Linimen Belladonnæ; Atropina; Extract. Belladonnæ Alcoholic
Balsamic resin	Acidum Benzoicum; Adeps Benzoatus (and Ointments taining it); Tinct. Benzoini Co.; Ung. Cetacei.
Dried leaves	Infusum Buchu, Tinctura Buchu.
Alkaloid from leaves of tea or seeds of coffee	Caffeina; Caffeinæ Citras.

B. P. Name.	Obtained from.	Natural Order.	Habitat.
Cajuputi Oleum	Melaleuca minor	Myrtaceæ	Imported from Batavia and Singapore
Calumbæ Radix	Jateorhiza Calumba	Menispermaceæ	Eastern Africa, between Ibo and Zambesi
Cambogia	Garcinia Hanburii	Guttiferæ	Siam
Camphora	Cinnamomum Camphora	Lauraceæ	China and Japan (purified her
Canellæ Albæ Cortex	Canella alba	Canellaceæ	West Indies
Cannabis Indica	Cannabis sativa	Cannabinaceæ	India
Cantharis	Cantharis vesicatoria	Coleoptera	Hungary
Capsici Fructus	Capsicum fastigiatum	Solanaceæ	Zanzibar
Cardamomum	Elettaria Cardamomum	Zingiberaceæ	Malabar
Carui Fructus	Carum Carui	Umbelliferæ	England and Germany
Caryophyllum	Eugenia Caryophyllata	Myrtaceæ	Penang, Bencoolen, and Amboyna
Cascara Sagrada	Rhamnus Purshianus	Rhamnaceæ	Pacific Coast of North Ameri
Cascarillæ Cortex	Croton Eluteria	Euphorbiaceæ	Bahama Islands
Cassiæ Pulpa	Cassia Fistula	Leguminosæ	East and West Indies
Catechu	Uncaria Gambir	Cinchonaceæ	Singapore, and other place in the Eastern Archipelag
Cera Flava	Apis mollifica	Hymenoptera	Indigenous
Cerevisiæ Fermentum	Saccharomyces Cerevisiæ	Fungi	
Cetaceum	Physeter macrocephalus	Cetacea	Pacific and Indian Oceans
Cetraria	Cetraria Islandica	Lichenes	North of Europe
Chirata	Ophelia Chirata	Gentianaceæ	Northern India
Chrysarobinum	Andira Araroba	Leguminosæ	India
Cimicifugæ Rhizoma	Cimicifuga Racemosa	Ranunculaceæ	North America
Cinchonæ Cortex	Cinchona Calisaya Cinchona succirubra Cinchona lancifolia	Cinchonaceæ	South America chiefly
Cinchonæ Rubræ Cortex	Cinchona succirubra	Cinchonaceæ	South America, cultivate in East Indies
Cinnamomi Cortex	Cinnamomum Zeylanicum	Lauraceæ	Ceylon
Coca	Erythroxylon Coca	Erythroxylaceæ	Peru
Coccus	Coccus Cacti	Hemiptera	Mexico and Teneriffe
Colchicum	Colchicum autumnale	Melanthaceæ	Indigenous
Colocynthidis Pulpa	Citrullus Colocynthis	Cucurbitaceæ	Smyrna, Trieste, and Spain

Parts used.	Preparations into which it enters.
e leaves	Spiritus Cajuputi, Lin. Crotonis.
	Extractum, Infusum, and Tinct. Calumbæ; Mist. Ferri Aromat.
	Pilula Cambogiæ Composita.
ptene obtained from od	Aqua Camph.; Linimentum Camph.; Lin. Camph. Co.; Spiritus Camph.; Tinct. Camph. Co.; Ung. Hydrarg. Co.; and all the liniments except Ammoniæ, Calcis, Crotonis, Potassii Iodidi c. Sapone.
ırk deprived of its layer	Vinum Rhei.
wering or fruiting female plants	Extractum Cannabis Ind.; Tinctura Cannab. Ind.
eetle	Acetum, Emplastrum, Tinctura and Unguentum Cantharidis; Charta Epispastica; Liquor Epispast.; Emplast. Calefaciens.
fruit	Tinctura Capsici.
dried capsules	Tinct. Cardam. Co.; Ext. Coloc. Co.; Pulv. Cinnam. Co.; Pulv. Cretæ Arom.; Tinct. Gentian. Co.; Tinct. Rhei; Vinum Aloes.
	Aqua and Oleum Carui; Confectio Opii; Conf. Piperis; Pulvis Opii Compositus; Tinct. Cardam. Co.; Tinct. Sennæ.
r-buds	Infusum and Oleum Caryophylli; Inf. Aurant. Co.; Mist. Ferri Arom.; Vinum Opii.
	Ext. Cascaræ Sagradæ; Ext. Cascar. Sagrad. Liquid.
	Infusum and Tinctura Cascarillæ.
the pods	Confectio Sennæ.
ct of the leaves and shoots	Infusum Catechu, Pulvis Catechu Comp., Tinctura Catechu, Trochisci Catechu.
	Cera Alba; Pil. Phosphori; Emplast. Calefaciens, Cantharidis, Galbani, Picis, Saponis fuscum; Unguenta Cantharidis, Hydrarg. Co., Picis Liquid., Resinæ, Sabinæ, Terebinthinæ.
	Cataplasma Fermenti.
te fatty substance, with oil, obtained e head of the sperm purified	Charta Epispastica; Unguentum Cetacei.
lichen dried	Decoctum Cetrariæ.
t	Infusum and Tinctura Chiratæ.
matter of stem and s	Ung. Chrysarobini.
me and rootlets	Ext. Cimicifugæ Liquid; Tinct. Cimicifugæ.
	Cinchonidinæ Sulphas; Cinchoninæ Sulphas; Quininæ Hydrochloras; Quininæ Sulphas.
k of stem and branches vated plants	Decoct. Cinchonæ; Ext. Cinchon. Liquid; Inf. Cinchon. Acid; Tinct. Cinchonæ; Tinct. Cinchon. Comp.; Mist. Ferri.
inner bark of shoots e truncated stocks	Aqua, Oleum, Pulvis Co., and Tinct. Cinnamomi; Infusum, Pulvis Co., and Tinct. Catechu; Decoct. Hæmatoxyli; Pulv. Cretæ Arom.; Pulv. Kino Co.; Tinct. Cardam. Co.; Tinct. Lavand. Co.; Vinum Opii.
es	Ext. Cocæ Liquid; Cocainæ Hydrochloras; Lamellæ Cocainæ.
le insect	Tinctura Cocci; Tinct. Cardam. Co.; Tinct. Cinchonæ Co.
dried corm and dried ds	Corm = Extractum, Extractum Aceticum and Vinum Colchici; Seeds = Tinctura Colchici Seminum.
eled fruit freed from	Extractum Coloc. Co.; Pil. Coloc. Co.; Pil. Coloc. et Hyoscyam.

B. P. Name.	Obtained from.	Natural Order.	Habitat.
Conium	Conium maculatum	Umbelliferæ	Britain
Copaiba	Copaifera Langsdorffii and other species	Leguminosæ	Valley of the Amazon
Coriandri Fructus	Coriandrum sativum	Umbelliferæ	Britain
Crocus	Crocus sativus	Iridaceæ	Spain, France, and Italy
Crotonis Oleum	Croton Tiglium	Euphorbiaceæ	Hindostan, Ceylon, Indian Archipelago
Cubeba	Piper Cubeba	Piperaceæ	Java
Cuspariæ Cortex	Galipea Cusparia	Rutaceæ	Tropical South America
Cusso	Hagenia abyssinica	Rosaceæ	Abyssinia
Digitalis Folia	Digitalis purpurea	Scrophulariaceæ	Indigenous
Ecballii Fructus	Ecballium Elaterium	Cucurbitaceæ	Britain
Elemi	Referred to Canarium commune	Amyridaceæ	Manilla
Ergota	Secale cereale	Graminaceæ	Britain
Eucalypti Oleum	Eucalyptus Globulus, Eucalyptus Amygdalina	Myrtaceæ	Australia
Farina Tritici	Triticum sativum	Graminaceæ	Britain
Fel Bovinum Purificatum	Bos Taurus	Ruminantia	Domesticated everywhere
Ficus	Ficus Carica	Moraceæ	Smyrna
Filix-Mas	Aspidium Filix-mas	Filices	Indigenous
Fœniculi Fructus	Fœniculum dulce	Umbelliferæ	Malta
Galbanum	Ferula galbaniflua, Ferula rubricaulis, and probably other species	Umbelliferæ	India and the Levant
Galla	Quercus lusitanica	Cupuliferæ	Asia Minor
Gelsemium	Gelsemium nitidum	Loganiaceæ	South America
Gentianæ Radix	Gentiana lutea	Gentianaceæ	Central and Southern Europe (mountains)
Glycyrrhizæ Radix	Glycyrrhiza glabra	Leguminosæ	England
Gossypium	Gossypium barbadense and other species	Malvaceæ	Warm and tropical regions
Granati Radicis Cortex	Punica Granatum	Granateæ	South of Europe
Guaiaci Lignum Guaiaci Resina	Guaiacum officinale or Guaiacum sanctum	Zygophyllaceæ	St. Domingo and Jamaica
Gutta Percha	Dichopsis Gutta and several other trees	Sapotaceæ	Eastern Islands
Hæmatoxyli Lignum	Hæmatoxylum Campechianum	Leguminosæ	Campeachy, Honduras, Jamaica
Hemidesmi Radix	Hemidesmus Indicus	Asclepiadaceæ	India
Hirudo	Sanguisuga medicinalis (speckled) officinalis (green)	Sanguisuga	Spain, France, Italy, H

Parts used.	Preparations into which it enters.
Fresh leaves and young branches, and dried fruit .	Cataplasma, Extractum, and Succus Conii (from the leaves); Tinctura Conii (from the fruit).
eo-resin	Oleum Copaibæ.
ied ripe fruit	Oleum Coriandri; Conf. Sennæ; Syrupus et Tinct. Rhei; Syrupus et Tinct. Sennæ.
The dried stigmas and top of the style	Tinctura Croci; Decoct. Aloes Co.; Pil. Aloes et Myrrh.; Pulv. Cretæ Aromat.; Tinct. Cinchon. Co.; Tinct. Opii Ammon.; Tinct. Rhei.
from the seeds	Oleum, Linimentum.
ied unripe fruit	Oleum Cubebæ; Tinctura Cubebæ; Oleo-resina Cubebæ.
rk	Infusum Cuspariæ.
wers and tops	Infusum Cusso.
ied leaf	Infusum and Tinctura Digitalis.
rly ripe fruit	Elaterium, Elaterinum, Pulvis Elaterini Compositus.
concrete resinous exudation .	Unguentum Elemi.
e sclerotium of *Claviceps purpurea*, produced within the paleæ of the common Rye (*Secale cereale*), and replacing the grain	Extractum Ergotæ Liquidum, Infusum Ergotæ, and Tinctura Ergotæ, Ergotinum, Inject. Ergotin. Hypoderm.
stilled oil from the leaves . .	Oleum.
grain of wheat ground and sifted	Cataplasma Fermenti.
e purified gall.	
ied fruit	Confectio Sennæ.
ied rhizome	Extractum Filicis Liquidum.
uit	Aqua Fœniculi.
m resin	Emplast. Galbani; Pil. Asafœtidæ Co.
Excrescences caused by the punctures and deposited ova of *Cynips Gallæ Tinctoriæ* .	Acidum Gallicum and Tannicum; Tinct., Ung., and Ung. Gallæ c. Opio.
ied rhizome and rootlets . . .	Extract. Gelsemii Alcoholicum; Tinct. Gelsemii.
ied root	Extractum, Infusum Co., and Tinct. Gentianæ Co.
Root and underground stem, fresh and dried	Extract., Ext. Liquid. and Pulv. Glycyrrh. Co.; Conf. Tereb. Dec. Sarsæ Co.; Inf. Lini; Pil. Hydr.; Pil. Ferri Iodid.
airs of the seed	Pyroxylin.
ried bark of the root	Decoctum Granati Radicis.
Heart-wood in chips	Decoct. Sarsæ Co.
Resin	Mist. Guaiaci; Pil. Hydrarg. Subchlor. Co.; Tinct. Guaiaci Ammon.
oncrete juice	Liquor Guttæ Perchæ.
ced heart-wood	Decoctum and Extractum Hæmatoxyli.
ried root	Syrupus Hemidesmi.
ch.	

B. P. Name.	Obtained from.	Natural Order.	Habitat.
Hordeum Decorticatum	Hordeum distichon	Graminaceæ	Britain
Hyoscyami Folia	Hyoscyamus niger	Atropaceæ	Britain
Ipecacuanha	Cephaëlis Ipecacuanha	Cinchonaceæ	Brazil
Jaborandi	Pilocarpus pennatifolius	Rutaceæ	Pernambuco
Jalapa	Ipomœa Purga	Convolvulaceæ	Mexico
Juniper	Juniperus communis	Coniferæ	North of Europe, indigenous
Kamala	Mallotus philippinensis	Euphorbiaceæ	India
Kino	Pterocarpus Marsupium	Leguminosæ	Malabar
Krameriæ Radix	Krameria triandra Krameria Ixina	Polygalaceæ	Peru
Lac	Bos Taurus	Ruminantia	Domesticated everywhere
Lactuca	Lactuca virosa	Compositæ	Indigenous
Laricis Cortex	Pinus Larix	Coniferæ	Indigenous
Laurocerasi Folia	Prunus Laurocerasus	Rosaceæ	Britain
Lavandula	Lavandula vera	Labiatæ	South of Europe
Limon	Citrus Limonum	Aurantiaceæ	South of Europe
Linum	Linum usitatissimum	Linaceæ	Britain
Lobelia	Lobelia inflata	Lobeliaceæ	North America
Lupulus	Humulus Lupulus	Cannabinaceæ	England
Manna	Fraxinus Ornus	Oleaceæ	Calabria and Sicily
Mastiche	Pistacia Lentiscus	Anacardiaceæ	Island of Scio
Maticæ Folia	Piper angustifolium	Piperaceæ	Peru
Mel	Apis mellifica	Hymenoptera	Universally domesticated
Mentha piperita Ol.	Mentha piperita	Labiatæ	Britain
Mentha viridis Ol.	Mentha viridis	Labiatæ	Britain
Menthol	Mentha Arvensis, var. Piperascens. Mentha Piperita, var. glabrata.	Labiatæ Britain	China and Japan United States
Mezerei Cortex	Daphne Mezereum Daphne Laureola	Thymelaceæ	Indigenous
Mica Panis	Triticum sativum	Graminaceæ	Indigenous
Mori Succus	Morus nigra	Moraceæ	Cultivated in Britain; native of Persia and China
Morrhuæ Oleum	Gadus Morrhua	(Genus) Acipenser	Coasts of Norway, France and England, Newfoundland and Labrador
Moschus	Moschus moschiferus	Ruminantia	Native of Central Asia; imported from China and India
Myristica	Myristica fragrans	Myristicaceæ	Banda Islands of the Malayan Archipelago
Myrrha	Balsamodendron Myrrha	Amyridaceæ	Arabia Felix and Abyssi
Nectandræ Cortex	Nectandra Rodiæi	Lauraceæ	British Guiana
Nux Vomica	Strychnos Nux-vomica	Loganiaceæ	East Indies
Olivæ Oleum	Olea Europæa	Oleaceæ	South of Europe

Parts used.	Preparations into which it enters.
aked seeds	Decoctum Hordei.
aves with or without branches .	Extractum, Succus, and Tinctura Hyoscyami.
ied root	Pil. Ipecac. c. Scillâ; Pulv. Ipecac. Co.; Trochisci Ipecac.; Trochisci Morphinæ et Ipecac.; Vinum Ipecac.; Pil. Conii Co.
ied leaflets	Extract., Infusum, and Tinct. Jaborandi; Pilocarpinæ Nitras.
ied tubercules	Extractum, Pulv. Co., Resina, and Tinctura Jalapæ; Pulvis Scammonii Compositus; Pil. Scammonii Comp.
from the unripe fruit . . .	Oleum, Spiritus.
inute glands and hairs obtained from the surface of the fruits.	
pissated juice from the trunk .	Pulvis Compositus, Tinct. Kino; Pulv. Catechu Co.
ed root	Extractum, Infusum, Tinctura Krameriæ; Pulv. Catechu Co.
sh milk	Mistura Scammonii.
wering herb	Extractum Lactucæ.
ed inner bark	Tinct. Laricis.
sh leaves	Aqua Laurocerasi.
from the flowers	Oleum, Spiritus, and Tinctura Composita.
l and juice	Cortex = Oleum, Syrupus, Tinctura Limonis; Inf. Aurant. Co.; Inf. Gentian. Co.; Succus = Syrupus Limonis.
ried ripe seeds, entire and reduced to powder	Farina Lini, Infusum Lini, Oleum Lini; Cataplasmata except Fermenti.
ied flowering herb	Tinctura Lobeliæ. Tinct. Lobeliæ Ætherea.
ed strobiles	Extractum, Infusum, Tinctura Lupuli, Lupulinum.
oncrete saccharine exudation from the stem.	
oncrete resinous exudation from the stem and branches.	
ed leaves	Infusum Maticæ.
ccharine secretion in honeycomb	Mel Boracis; Mel depuratum; Oxymel; Oxymel Scillæ; Conf. Piper.; Conf. Scammon.; Conf. Tereb.
distilled in Britain	Aqua, Essentia, and Spiritus Menthæ Piperitæ; Pil. Rhei Co. Tinct. Chloroformi et Morphinæ.
distilled in Britain	Aqua Menthæ Viridis.
roptene of oil	Menthol.
ed bark	Extractum Mezerei Æthereum; Decoctum Sarsæ Compositum.
mb of bread of wheat flour . .	Cataplasma Carbonis.
e of ripe fruit	Syrupus Mori.
of fresh liver of the Cod.	
ried secretion from the preputial follicles.	
ed seed divested of its coat . .	Oleum, and Oleum Myristicæ Expressum; Pulv. Catechu Co.; Pulv. Cretæ Aromat.; Sp. Armoraciæ Co.; Tinct. Lavand. Co.
n-resin (from the stem) . . .	Tinct. Myrrh.; Pil. Aloes et Myrrh.; Decoct. Aloes Co. Mist. Ferri Co.; Pil. Asafœtidæ Co.; Pil. Rhei Co.
k	Beberinæ Sulphas.
ls	Extractum and Tinctura Nucis Vomicæ; Strychnina.
from the fruit	Charta Epispastica; Cataplasma Lini; Emplastra; Enema Mag. Sulph.; Lin. Ammon., Calcis, Camphoræ; Unguenta, several.

B. P. Name.	Obtained from.	Natural Order.	Habitat.
Opium	Papaver somniferum	Papaveraceæ	**Asia Minor (Smyrna)**
Ovi Vitellus	Gallus Bankiva	(Class) Aves	**Domesticated everywhere**
Papaveris Capsulæ	Papaver somniferum	Papaveraceæ	**Britain**
Pareiræ Radix	Chondodendron tomentosum	**Menispermaceæ**	**Brazil**
Physostigmatis Semen	Physostigma venenosum	**Leguminosæ**	**Western Africa**
Pimenta	Pimenta officinalis	**Myrtaceæ**	**West Indies**
Piper nigrum	Piper nigrum	Piperaceæ	**East Indies**
Pix Burgundica	Pinus Picea	Coniferæ	**Germany**
Pix liquida	Pinus sylvestris and other species	Coniferæ	**Scotland,Denmark,and Nor**
Podophylli Rhizoma	Podophyllum peltatum	Ranunculaceæ (*Berberideæ, Hanbury*)	**North America**
Prunum	Prunus domestica	Rosaceæ	**South of France**
Pterocarpi Lignum	Pterocarpus santalinus	**Leguminosæ**	**Ceylon**
Pyrethri Radix	Anacyclus Pyrethrum	**Compositæ**	**Levant**
Quassiæ Lignum	Picræna excelsa	Simarubaceæ	**Jamaica**
Quercus Cortex	Quercus Robur	Cupuliferæ	**Britain**
Resina	Various species of Pinus.	**Coniferæ**	**America**
Rhamni Frangulæ Cortex	**Rhamnus Frangula**	**Rhamnaceæ**	**Europe**
Rhamnus Purshianus. *See* Cascara Sagrada.			
Rhei Radix	Rheum palmatum, Rheum officinale, and probably other species	Polygonaceæ	Collected and prepared i China and Thibet
Rhœados Petala	Papaver Rhœas	Papaveraceæ	**Indigenous**
Ricinus	Ricinus communis	Euphorbiaceæ	**India**
Rosæ Caninæ Fructus	Rosa canina, and other indigenous allied species	Rosaceæ	**Indigenous**
Rosæ Centifoliæ Petala	Rosa centifolia		**Britain**
Rosæ Gallicæ Petala	**Rosa gallica**		**Britain**
Rosmarinus	**Rosmarinus officinalis.**	**Labiatæ**	South of Europe, **Asia Mi** nor; cultivated in **Englan**
Ruta	**Ruta graveolens**	**Rutaceæ**	**South of Europe**
Sabadilla	**Schænocaulon officinale**	**Melanthaceæ**	**Mexico**
Sabinæ Cacumina	**Juniperus Sabina**	**Coniferæ**	**Britain**
Saccharum	**Saccharum officinarum** **Beta vulgaris**	**Graminaceæ** **Chenopodiaceæ**	**West Indies** **Europe**
Saccharum Lactis	**Bos Taurus**	**Ruminantia**	**Domesticated everywhere**
Salicinum	**Salix alba, and other species of Salix and various species of Populus**	**Salicaceæ**	**Temperate regions of t Northern Hemispher**
Sambuci Flores	**Sambucus nigra.**	**Caprifoliaceæ**	**Indigenous**
Santali Oleum	**Santalum Album**	**Santalaceæ**	**India**
Santonica	**Artemisia, Maritima, var. Stechmanniana**	**Compositæ**	**Russia**
Sarsæ Radix	**Smilax officinalis**	**Smilaceæ**	**Native of Central Amer imported from Jama**
Sassafras Radix	**Sassafras officinale**	**Lauraceæ**	**North America**

Parts used.	Preparations into which it enters.
ated juice from unripe les	Preparations many. *Vide* Opium.
. . . .	Mistura Spiritus Vini Gallici.
ripe dried capsules of te Poppy	Decoctum, Extractum, Syrupus Papaveris.
ot	Decoctum, Extractum, Extractum Pareiræ Liquidum.
d	Extractum Physostigmatis; Physostigmina; Lamellæ Physostigminæ.
ripe berries	Aqua, Oleum Pimentæ.
ripe berries	Confectio Opii; Confectio Piperis; Pulv. Opii Co.
exudation from the stem	Emplastrum Ferri; Emplastrum Picis.
nous liquid obtained the wood	Unguentum Picis Liquidæ.
izome	Resina Podophylli.
upe of the plum	Confectio Sennæ.
ood	Tinctura Lavandulæ Composita.
ot	Tinctura Pyrethri.
. . . .	Extractum, Infusum, and Tinctura Quassiæ.
rk of young tree	Decoctum Quercus.
idue left after the distilla- of the Oil of Turpentine the crude Oleo-resin.	Emplastrum and Unguentum Resinæ.
rk	Ext. Rhamni Frangulæ; Ext. Rhamni Frangulæ Liquid.
ot deprived of the bark	Extractum Rhei, Infusum Rhei, Pilula Rhei Co., Pulvis Rhei Co., Syrupus Rhei, Tinctura Rhei, and Vinum Rhei.
tals	Syrupus Rhœados.
ssed from the seeds	Oleum Ricini.
t.	Confectio Rosæ Caninæ.
lly expanded petals.	Aqua Rosæ.
d dried unexpanded petals	Confectio and Syrupus Rosæ Gallicæ; Infusum Rosæ Acidum.
led from the flowering tops	Oleum and Spiritus Rosmarini; Lin. Saponis and Tinct. Lavand Comp.
led from fresh herb	Oleum Rutæ.
ripe seeds freed from pericarps	Veratrina.
d dried tops	Oleum, Tinctura, and Unguentum Sabinæ.
the stem the root	All Syrups and Lozenges.
milk, evaporated	Saccharum Lactis; Pulv. Elaterini Comp.
line glucoside obtained the bark	Salicinum.
wers	Aqua Sambuci.
oil	Oleum.
nexpanded flower-heads pitula	Santoninum.
t	Decoctum Sarsæ, Decoct. Sarsæ Co., Extractum Sarsæ Liquidum.
t	Decoctum Sarsæ Co.

B. P. Name.	Obtained from.	Natural Order.	Habitat.
Opium	Papaver somniferum	Papaveraceæ	Asia Minor (Smyrna)
Ovi Vitellus	Gallus Bankiva	(Class) Aves	Domesticated everywh
Papaveris Capsulæ	Papaver somniferum	Papaveraceæ	Britain
Pareiræ Radix	Chondodendron tomentosum	Menispermaceæ	Brazil
Physostigmatis Semen	Physostigma venenosum	Leguminosæ	Western Africa
Pimenta	Pimenta officinalis	Myrtaceæ	West Indies
Piper nigrum	Piper nigrum	Piperaceæ	East Indies
Pix Burgundica	Pinus Picea	Coniferæ	Germany
Pix liquida	Pinus sylvestris and other species	Coniferæ	Scotland, Denmark, an
Podophylli Rhizoma	Podophyllum peltatum	Ranunculaceæ (*Berberideæ*, *Hanbury*)	North America
Prunum	Prunus domestica	Rosaceæ	South of France
Pterocarpi Lignum	Pterocarpus santalinus	Leguminosæ	Ceylon
Pyrethri Radix	Anacyclus Pyrethrum	Compositæ	Levant
Quassiæ Lignum	Picræna excelsa	Simarubaceæ	Jamaica
Quercus Cortex	Quercus Robur	Cupuliferæ	Britain
Resina	Various species of Pinus.	Coniferæ	America
Rhamni Frangulæ Cortex	Rhamnus Frangula	Rhamnaceæ	Europe
Rhamnus Purshianus. *See* Cascara Sagrada.			
Rhei Radix	Rheum palmatum, Rheum officinale, and probably other species	Polygonaceæ	Collected and prep China and Thibet
Rhœados Petala	Papaver Rhœas	Papaveraceæ	Indigenous
Ricinus	Ricinus communis	Euphorbiaceæ	India
Rosæ Caninæ Fructus	Rosa canina, and other indigenous allied species	Rosaceæ	Indigenous
Rosæ Centifoliæ Petala	Rosa centifolia		Britain
Rosæ Gallicæ Petala	Rosa gallica		Britain
Rosmarinus	Rosmarinus officinalis.	Labiatæ	South of Europe, A nor; cultivated in E
Ruta	Ruta graveolens	Rutaceæ	South of Europe
Sabadilla	Schœnocaulon officinale	Melanthaceæ	Mexico
Sabinæ Cacumina	Juniperus Sabina	Coniferæ	Britain
Saccharum	Saccharum officinarum. Beta vulgaris	Graminaceæ Chenopodiaceæ	West Indies Europe
Saccharum Lactis	Bos Taurus	Ruminantia	Domesticated everyw
Salicinum	Salix alba, and other species of Salix and various species of Populus	Salicaceæ	Temperate regions Northern Hemisp
Sambuci Flores	Sambucus nigra.	Caprifoliaceæ	Indigenous
Santali Oleum	Santalum Album	Santalaceæ	India
Santonica	Artemisia, Maritima, var. Stechmanniana	Compositæ	Russia
Sarsæ Radix	Smilax officinalis	Smilaceæ	Native of Central A imported from Ja
Sassafras Radix	Sassafras officinale	Lauraceæ	North America

Parts used.	Preparations into which it enters.
Inspissated juice from unripe capsules	Preparations many. *Vide* Opium.
olk	Mistura Spiritus Vini Gallici.
Nearly ripe dried capsules of White Poppy	Decoctum, Extractum, Syrupus Papaveris.
ried root	Decoctum, Extractum, Extractum Pareiræ Liquidum.
ried seed	Extractum Physostigmatis; Physostigmina; Lamellæ Physostigminæ.
ried unripe berries	Aqua, Oleum Pimentæ.
ried unripe berries	Confectio Opii; Confectio Piperis; Pulv. Opii Co.
esinous exudation from the stem	Emplastrum Ferri; Emplastrum Picis.
Bituminous liquid obtained from the wood	Unguentum Picis Liquidæ.
ried rhizome	Resina Podophylli.
ried drupe of the plum	Confectio Sennæ.
eart-wood	Tinctura Lavandulæ Composita.
ried root	Tinctura Pyrethri.
ood	Extractum, Infusum, and Tinctura Quassiæ.
ried bark of young tree	Decoctum Quercus.
The residue left after the distillation of the Oil of Turpentine from the crude Oleo-resin.	Emplastrum and Unguentum Resinæ.
ried bark	Ext. Rhamni Frangulæ; Ext. Rhamni Frangulæ Liquid.
ried root deprived of the bark	Extractum Rhei, Infusum Rhei, Pilula Rhei Co., Pulvis Rhei Co., Syrupus Rhei, Tinctura Rhei, and Vinum Rhei.
resh petals	Syrupus Rhœados.
il expressed from the seeds	Oleum Ricini.
ipe fruit	Confectio Rosæ Caninæ.
resh fully expanded petals	Aqua Rosæ.
resh and dried unexpanded petals	Confectio and Syrupus Rosæ Gallicæ; Infusum Rosæ Acidum.
il distilled from the flowering tops	Oleum and Spiritus Rosmarini; Lin. Saponis and Tinct. Lavand Comp.
il distilled from fresh herb	Oleum Rutæ.
Dried ripe seeds freed from their pericarps	Veratrina.
resh and dried tops	Oleum, Tinctura, and Unguentum Sabinæ.
uice of the stem uice of the root	All Syrups and Lozenges.
hey of milk, evaporated	Saccharum Lactis; Pulv. Elaterini Comp.
Crystalline glucoside obtained from the bark	Salicinum.
esh flowers	Aqua Sambuci.
olatile oil	Oleum.
Dried unexpanded flower-heads or capitula	Santoninum.
ried root	Decoctum Sarsæ, Decoct. Sarsæ Co., Extractum Sarsæ Liquidum.
ied root	Decoctum Sarsæ Co.

B. P. Name.	Obtained from.	Natural Order.	Habitat.
Scammoniæ Radix	Convolvulus Scammonia	Convolvulaceæ	**Syria and Asia Minor**
Scammonium	Convolvulus Scammonia	Convolvulaceæ	**Asia Minor**
Scilla	Urginea Scilla	Liliaceæ	**Mediterranean coasts**
Scoparii Cacumina	Cytisus scoparius	Leguminosæ	**Indigenous**
Senegæ Radix	Polygala Senega	Polygalaceæ	**North America**
Senna Alexandrina	Cassia acutifolia	Leguminosæ	**Alexandria**
Senna Indica	Cassia angustifolia	Leguminosæ	**Southern India**
Serpentariæ Rhizoma	Aristolochia Serpentaria or Aristolochia reticulata	Aristolochiaceæ	**Southern parts of North America**
Sinapis	Brassica alba Brassica nigra	Cruciferæ	**Indigenous**
Staphisagriæ Semina	Delphinium Staphisagriæ	Ranunculaceæ	**Britain**
Stramonium	Datura Stramonium	Atropaceæ	**Britain**
Styrax præparatus	Liquidambar orientalis	Liquidambaraceæ	**South-west of Asia Minor, and Cyprus**
Sumbul Radix	Ferula Sumbul	Umbelliferæ	**Russia and India**
Tabaci Folia	Nicotiana Tabacum	Atropaceæ	**America**
Tamarindus	Tamarindus Indica	Leguminosæ	**West Indies**
Taraxaci Radix	Taraxacum Dens-leonis	Compositæ	**Britain**
Terebinthina Canadensis	Abies balsamea	Coniferæ	**Canada**
Theobromæ Oleum	Theobroma Cacao	Sterculiaceæ	**America**
Theriaca	Saccharum officinarum	Graminaceæ	**West Indies and elsewhere**
Thus Americanum	Pinus Tæda Pinus palustris	Coniferæ	**Southern States of North America**
Thymol	Thymus vulgaris Monarda punctata Carum Ajowan	Labiatæ Umbelliferæ	**Largely produced in France**
Tragacantha	Astragalus verus	Leguminosæ	**Asia Minor**
Uvæ Ursi Folia	Arctostaphylos Uvæ Ursi	Ericaceæ	**Indigenous**
Uvæ	Vitis vinifera	Vitaceæ	**Spain**
Valerianæ Radix	Valeriana officinalis	Valerianaceæ	**Britain**
Veratria	Asagræa officinalis	Melanthaceæ	**Mexico**
Veratri Viridis Radix	Veratrum viride	Melanthaceæ	**United States and Canada**
Zingiber	Zingiber officinale	Zingiberaceæ	**West Indies and India**

Parts used.	Preparations into which it enters.
oot and resin	Resina Scam.; Pil. Scam. Co.; Pulv. Scam. Co.; Conf. Scam.; Ext. Col. Co.; Pil. Col. Co.; Pil. Col. et Hyoscyam.
sin obtained from living root	Mist. Scam.; Resina Scam.
nd dried bulb	Acetum, Oxymel, Pilula Co., Syrupus, Tinctura Scillæ; Pil. Ipecac. c. Scillâ.
nd dried tops	Decoct. Scoparii (from dried); Succus Scoparii (from fresh).
oot	Infusum and Tinctura Senegæ.
aflets	Confectio, Infusum, Mistura Co., Syrupus, and Tinctura Sennæ; Pulvis Glycyrrhizæ Compositus.
aflets	May be used in the place of Alexandrian Senna.
hizome	Infusum and Tinctura Serpentariæ; Tinct. Cinchon. Co.
both mixed	Cataplasma, Charta, and Oleum Sinapis.
ipe seeds	Unguentum Staphisagriæ.
ipe seeds	Extractum and Tinctura Stramonii.
from the inner bark purified.	Tinctura Benzoini Composita.
	Tinctura Sumbul.
eaves.	
the fruit	Confectio Sennæ.
nd dried roots	Decoctum, Extractum, Succus Taraxaci.
tine (Canada Balsam)	Charta Epispastica; Collodion Flexile.
te oil	Suppositoria.
ystallizable residue of the ining of sugar	Various Pill-masses.
te Turpentine	Emplastrum Picis.
tene of the oil	Thymol.
y exudation	Mucilago, Pulv. Tragac. Co.; Conf. Opii; Pulv. Opii Co.
eaves	Infusum Uvæ Ursi.
uit	Tinct. Cardam. Co.; Tinct. Sennæ.
oot	Infusum, Tinctura, Tinctura Valerianæ Ammoniata.
aloid from Cevadilla	Unguentum Veratrinæ.
hizome	Tinctura Veratri Viridis.
l and dried rhizome	Syrupus, Tinctura, Tinctura Zingiberis Fortior. It is also used in some powders and other preparations.

SYMBOLS AND ATOMIC WEIGHTS OF THE ELEMENTARY BODIES MENTIONED IN THE BRITISH PHARMACOPŒIA.

Elementary Bodies.	Symbols and Atomic weights.
Aluminium	Al = 27
Antimony (Stibium)	Sb = 120
Arsenium	As = 75
Barium	Ba = 137
Bismuth	Bi = 209
Boron	B = 11
Bromine	Br = 80
Calcium	Ca = 40
Carbon	C = 12
Cerium	Ce = 141
Chlorine	Cl = 35·5
Chromium	Cr = 52·5
Copper (Cuprum)	Cu = 63·4
Gold (Aurum)	Au = 196·5
Hydrogen	H = 1
Iodine	I = 127
Iron (Ferrum)	Fe = 56
Lead (Plumbum)	Pb = 207
Lithium	Li = 7
Magnesium	Mg = 24
Manganese	Mn = 55
Mercury (Hydrargyrum)	Hg = 200
Nitrogen	N = 14
Oxygen	O = 16
Phosphorus	P = 31
Platinum	Pt = 195
Potassium (Kalium)	K = 39
Silver (Argentum)	Ag = 108
Sodium (Natrium)	Na = 23
Sulphur	S = 32
Tin (Stannum)	Sn = 118
Zinc	Zn = 65

MATERIA MEDICA,

WITH

COMPOUNDS AND PREPARATIONS.

Not Official.

ABRUS PRECATORIUS.

JEQUIRITY.

The root of Abrus Precatorius is used in many hot countries for the same purpose as liquorice root, hence it is called Indian or Jamaica liquorice. An infusion of the seeds has been introduced in the treatment of granular lids; it sets up a purulent ophthalmia of a croupous nature, varying in intensity with the strength and frequency of the applications. A very strong infusion, or rather paste, has been also found useful by Dr. Shoemaker in the treatment of affections of the skin, dependent upon exuberant granulations and proliferating cell growths, though only to be used under careful supervision and with due caution. (*Med. Bulletin*, Nov., 1884.)

Considerable difference of opinion exists as to the nature of the determining cause of the inflamation, but it seems probable that it is affected, if not destroyed, by heat.

Infusum (Dr. Moyne's).—Jequirity seeds in powder, 3·2; macerate in cold Water, 500, for 24 hours, and then add hot Water, 500; when cold, filter.

Pasta (Dr. Shoemaker's).—Decorticated seeds carefully freed from testa, 200; macerate in Water for 24 hours, reduce in a mortar to a smooth paste, and add sufficient Water to make 800.

To be applied with a camel's hair pencil.

ACACIÆ GUMMI.

GUM ACACIA.

A gummy exudation from the stem and branches of Acacia Senegal, and from other species of Acacia, collected chiefly in Kordofan in Africa, and imported from Alexandria.

In spheroidal tears, opaque from numerous cracks, nearly white.

We have taken the sp. g. of several samples of good white Gum Acacia, and find that it varies very little from 1·5.

It consists chiefly of Calcium Arabate, containing also Potassium and Magnesium; it contains 12 to 17 per cent. of Water, and yields 2·7 to 4 per cent. of Ash.

Its aqueous solution reddens blue litmus paper.

Solubility, 1 in 1 of Water. Insoluble in Alcohol, Ether, and Oils.

Test.—Powder of Gum should be white and free from Starch, and therefore a solution made with boiling Water and cooled should not be rendered blue or violet by an aqueous solution of Iodine.

Adulteration with dextrin can be detected by the use of Ferric Chloride and Alcohol. For process see *Allen's Commercial Analysis.*

Medicinal Properties.

Emollient, nutritive. Allowed to dissolve slowly in the mouth, allays tickling cough. For a demulcent drink, 1 of Mucilage, 1 of Syrup, and 20 of Water.

Dose.—Ad libitum.

Preparations.

MUCILAGO ACACIÆ. Faintly coloured, slightly opaque.

Gum Acacia, in small pieces, 40; Distilled Water, 60: put these into a covered jar and stir frequently until the gum is dissolved. =(1 and 1½).

The product measures only 87, therefore 4 of Gum are contained in 8¾ measures of Mucilage. Sp. g. 1·160 to 1·170.

(Fr. 1 and 1; Austr. Dan. Ger. and Russ. 1 and 2; Belg. 1 and 4—also M. Spissa 1 and 2—and M. Levis, 1 and 9; U.S. 34 and 66.)

Dose.—1 to 4 drms.

INCOMPATIBLES.—Alcohol and Sulphuric Acid; Borax, Persalts of Iron, and Subacetate of Lead render it gelatinous. It is not affected by neutral Acetate of Lead.

Squibb has found that solution of the Gum is facilitated by using it in the form of a coarse powder, not larger than No. 50, nor smaller than No. 80 sieve, free from fine powder.—*Ephemeris*, March, 1883.

German and United States Pharmacopœias direct that the Gum should be washed with cold Water, before being dissolved.

An excellent mode of preserving Mucilage from change in hot weather is to fill 6-ounce bottles with it as soon as made, and cork them.

Mucilage, if kept carelessly only a week in hot weather, becomes sour, and its emulsive property is impaired: if made with hot Water the change is more rapid.

It is much used in cough linctuses and lozenges, and frequently to render oils, &c., emulsive with aqueous fluids; 3 drms. are required for 1 oz. of oils or resinous tinctures, 10 drms. for 1 oz. of Copaiba. The Mucilage should be put into a mortar and the Oil added by degrees, with constant trituration. Used to keep Bismuth and other powders suspended, but Tragacanth answers better. It is sometimes used to make powders into pills, but they become hard after being kept a short time, therefore Castor-oil, Glycerine, Treacle, and even Confection of Roses, are to be preferred.

It is impossible to make a nice emulsion with some of the oils (the Oil of Male Fern for instance) unless the Mucilage be quite fresh; if fresh Mucilage is not at hand, half the quantity of the powder of Acacia can be used: first rub the powder with the Oil, then add Water equal to double the weight of the powder, and rub till an emulsion is formed; now add by degrees any quantity of aqueous liquid ordered in the prescription.

Not Official.

POTION GOMMEUSE (Fr.).—Powdered Gum Arabic, 1; Simple Syrup, 3; Orange Flower Water, 1; Water, 10.

SIROP DE GOMME (Fr.).—Gum, 10; Sugar, 67; Water, 43; dissolve the Gum in cold Water, then the Sugar by the aid of a water-bath; and strain.

ACETUM.

VINEGAR.

An acid liquid of a brown colour and peculiar odour, prepared from malt and unmalted grain by the acetous fermentation; contains 5·41 per cent. real Acid, $\mathbf{HC_2H_3O_2}$.

Tests.—Sp. g. 1·017 to 1·019. Ten minims of the Solution of

Chloride of Barium (1 in 8) will precipitate all the Sulphuric Acid in an ounce of Vinegar, equal to $\frac{1}{1000}$ part, which by law is allowed to be added to it. 445·4 grains by weight (1 fluid ounce) require at least 402 grain-measures of volumetric Solution of Soda for neutralization.* Sulphuretted Hydrogen causes no change in colour—indicating absence of metals.

(Austr. Belg. and Ger. 6 per cent. Acetic Acid; Russ. 5 p. c.; Dan. 4·7 p. c.; all are without Sulphuric Acid.)

Medicinal Properties.

Given to diminish profuse sweating in hectic cases. With Infusion of Sage it forms an astringent gargle. Used externally in lotions and fomentations. Used also to sponge the surface of the skin to allay heat, or with lint as a cooling discutient to bruises and sprains.

The most ready and safe antidote in cases of poisoning by alkalies.

A wineglassful of Vinegar has been given internally with great success in post-partum hæmorrhage. (*Brit. Med. Journal*, Jan. 12, 1884.)

Dose.—1 to 2 drms. diluted.

INCOMPATIBLES.—Ammonia, Lime, all the Alkalies, and Carbonates.

Used in making Empl. Cerat. Saponis.

ACETUM CANTHARIDIS.—*See* CANTHARIS.
ACETUM SCILLÆ.—*See* SCILLA.

ACIDUM ACETICUM.

The British Pharmacopœia orders only three strengths:—

ACIDUM ACETICUM DILUTUM,	sp. g.	1·006,	contains	4·27	per cent.	Real Acid.
ACIDUM ACETICUM	,,	1·044,	,,	33	,,	,,
ACIDUM ACETICUM GLACIALE	,,	1·058,	,,	99	,,	,,

ACIDUM ACETICUM.

ACETIC ACID. PURIFIED PYROLIGNEOUS ACID.

A colourless acid liquid, with pungent odour, prepared from wood by destructive distillation and subsequent purification, containing 33 per cent. of real Acid, $HC_2H_3O_2$, eq. 60.

Tests.—Sp. g. 1·044. 182 grains by weight require for neutralization 1000 grain-measures of the volumetric Solution of Soda. It leaves no residue when evaporated. It gives no precipitate with Sulphuretted Hydrogen, Chloride of Barium, or Nitrate of Silver—indicating absence of metals, Sulphuric and Hydrochloric Acids. If a fluid drachm of it mixed with half an ounce of Distilled Water and half a drachm of pure Hydrochloric Acid be put into a small flask with a few pieces of Granulated Zinc, and while the effervescence continues, a slip of bibulous paper wetted with Solution of Subacetate of Lead be suspended in the upper part of the flask above the liquid for about five minutes, the paper will not become discoloured—indicating absence of Sulphurous Acid.

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* Phenol-phthalein is better than Litmus as an indicator for this and most organic acids.

When supersaturated with Solution of Potash it should not have a smoky odour or taste, indicating absence of empyreumatic substances.

A mixture of equal volumes of this Acid and of Water is of the same neutralizing power as the diluted mineral acids of the Pharmacopœia, and is of the right strength for subcutaneous injection in cancer.

(U.S. 36 per cent. Acid, sp. g. 1·048; Dan. and Russ. 30 p. c.; (Acid. Acet. Dilut. Austr. 20·4 p. c. and Ger. 30 p. c.); Fr. 50 p. c., sp. g. 1·060; Belg. and Ger. 96 p. c., sp. g. 1·064.)

Used in the preparation of Acidum Aceticum Dilutum, Extractum Colchici Aceticum, Liquor Ammonii Acetatis, Oxymel, and Tinct. Ferri Acetatis.

ACIDUM ACETICUM DILUTUM.

DILUTED ACETIC ACID.

Colourless, and is of the same strength as Distilled Vinegar. Contains 4·27 per cent. of real Acid, $\mathbf{HC_2H_3O_2}$, eq. 60.

Acetic Acid, 1; Distilled Water, 7; mix. =(1 in 8).

Test.—Sp. g. 1·006. 440 grains by weight (1 fluid ounce) require for neutralization 313 grain-measures of the volumetric solution of Soda.

(Austr. 20·4 per cent. Acetic Acid; Ger. 30 p. c., sp. g. 1·041; Belg. 9·6 p. c. sp. g. 1·014; Russ. 4 p. c.; U. S. 6 p. c., sp. g. 1·0083; see also Acetum.)

Medicinal Properties.

Used for the same purposes as common Vinegar; when more concentrated it is used for subcutaneous injection in cancer. (*See* ACIDUM ACETICUM.)

Dose.—1 to 2 drms. with Water.

Used to prepare Acetum Scillæ and Liquor Morphinæ Acetatis.

ACIDUM ACETICUM GLACIALE.

GLACIAL ACETIC ACID.

Colourless, containing nearly 99 per cent. of real Acetic Acid, $\mathbf{HC_2H_3O_2}$, eq. 60.

It dissolves Camphor, Gum-resins, Resins, and Volatile Oils.

Tests.—Sp. g. 1·058, which is increased by adding 10 per cent. of Water; the sp. g. increases with the gradual addition of Water until 30 per cent. has been added, when it will have sp. g. 1·078, the further addition of Water again reduces it; when 100 per cent. (equal volumes) of Water have been added, it will be sp. g. 1·063. 60 grains by weight in an ounce of Water require for neutralization at least 990 grain-measures of the volumetric Solution of Soda. When diluted gives no precipitate with Chloride of Barium or Nitrate of Silver—indicating the absence of Sulphuric and Hydrochloric Acids. Tried by the test mentioned in Acetic Acid, should indicate absence of Sulphurous Acid. When supersaturated with solution of Potash it should not have a smoky odour or taste—absence of empyreumatic substances.

Mix 1 c.c. of Acid with 5 c.c. distilled Water in a clean test tube, and then add one drop of decinormal solution of Permanganate of Potash; should not be sensibly changed in one hour. (Squibb.)

It is three times as strong as Acidum Aceticum, and nearly twenty-four times as strong as Acidum Aceticum Dilutum. It is a colourless liquid, with pungent acetous odour; it crystallises when cooled, and remains crystalline until the temperature rises to above 60° F. (15·5° C.)

(Belg. and Ger. Acid. Aceticum. 96 p. c.; Fr. Acide Acétique Crystallisable sp. g. 1·063, nearly 100 p. c.; Austr. A. A. Concentratum, 96 p. c.; Russ. 98 p. c.; U.S. sp. g. 1·056—1·058, not less than 99 p. c.; not in Dan.).

Medicinal Properties.

Escharotic; used for corns and warts, especially when of a syphilitic character; it speedily vesicates, and thus is useful in cases where Cantharides may do harm by being absorbed; but it causes much pain, and if applied incautiously may produce a most troublesome sore. When scented, is employed to fill vinaigrettes containing sponge or fragments of Sulphate of Potassium.

It is an ingredient in Acetum Cantharidis, Linimentum Terebinthinæ Aceticum, Liquor Ferri Acetatis Fortior, and Mistura Creasoti.

Not Official.

Acidum Aceticum Aromaticum (Belg. and Russ.).—Glacial Acetic Acid, 72; Oil of Cloves, 9; do. Lavender, 6; do. Orange, 6; do. Bergamot, 3; do. Thyme, 3; do. Cinnamon, 1; all by weight; mix and filter.

Acetum Aromaticum (Ger.).—Oils of Lavender, Peppermint, Rosemary, Juniper, and Cinnamon, of each, 1; Oil of Lemon, 2; Oil of Cloves, 2; Spirit, 300; Diluted Acetic Acid, 450; Water, 1200; digest some days and filter.

Vinaigre Anglais (Fr.).—Glacial Acetic Acid, 500; Camphor, 50; Oil of Cinnamon, 1; Oil of Cloves, 1; Oil of Lavender, ½; mix.

Vinaigre des Quatre Voleurs (Fr.).—Tops of the Greater and Lesser Wormwood, Rosemary, Sage, Peppermint, Rue, Lavender Flowers, of each 15; Calamus Root, Cinnamon, Cloves, Nutmeg, Garlic, of each 2: Camphor, 4; Glacial Acetic Acid, 15; Strong White Vinegar, 1000; dissolve the Camphor in the Glacial Acid; macerate the other ingredients in the Vinegar for ten days; press and mix.

ACIDUM ARSENIOSUM.

ARSENIOUS ACID.

Syn.—Arsenious Anhydride; White Arsenic.

As_2O_3, eq. 198.

A heavy white powder, or stratified opaque masses, obtained by roasting Arsenical Ores, and purified by sublimation.

Solubility, 1 in 100 of cold Water; 1 in 20 of boiling Water; 1 in 500 of Rectified Spirit; 1 in 6 of Hydrochloric Acid; 1 in 8 of Glycerine; 1 in 11 of Solution of Potash; 1 in 40 of saturated Solution of Carbonate of Sodium.

Tests.—Entirely volatilized at a temperature not exceeding 400° F.; sublimes in octahedral crystals. 4 grains of it, dissolved in boiling Water with about 20 grains of Bicarbonate of Sodium, discharge the colour of 808 grain-measures of the volumetric solution of Iodine; the Arsenite of Sodium is converted into Arseniate, and the Iodine into Iodide of Sodium. An aqueous solution gives a canary-yellow precipitate with Ammonio-nitrate of silver, and a green precipitate with Ammonio-sulphate of Copper; both these precipitates are soluble in Ammonia, or Nitric Acid.

(U.S. Fr. and Belg. A. Arseniosum; Austr. Ger. Dan. and Russ. A. Arsenicosum.)

Medicinal Properties.

Is a nerve tonic, and given in Eczema, in chronic cutaneous diseases, and in chronic rheumatism of the joints; it is an antiperiodic in agues and neuralgic affections. Best given immediately after meals. Externally as a powerful caustic, and requires great care, as there is danger of absorption.

Dose.—$\frac{1}{60}$ to $\frac{1}{12}$ of a grain, in solution; rarely prescribed in the solid form.

One of the symptoms of injurious effects from the continued use of Arsenic is œdema of the eyelids.

INCOMPATIBLES.—Salts of Iron, Magnesia, Lime Water, and astringent matters.

ANTIDOTES.—In case of poisoning by Arsenic, the freshly prepared moist Peroxide of Iron, and Calcined Magnesia; Carron Oil, Stomach pump, Emetics, Ammonia, artificial respiration, cold affusion.

ANTIDOTUM ARSENICI, Ph. Germ. (Belg. Dan. and Russ. similar). Calcined Magnesia 15, in 250 of Water; 100 of Solution of Persulphate of Iron, sp. g. 1·430, in 250 of Water.

These two mixtures will keep separately, and may be mixed at the instant they are required to be administered.

Preparations.

LIQUOR ARSENICALIS (Fowleri). *Syn.* LIQ. POTASSÆ ARSENITIS. [ALTERED.]

Arsenious Acid, 87 grs.; Carbonate of Potassium, 87 grs.; Compound Tincture of Lavender, 5 fl. drms.; Distilled Water, 20 oz.: boil till dissolved, when cool add the tincture, and make up with Water to 20 oz.
=(1 grain of Arsenic in 110 minims).

This preparation has been altered so as to make it contain 1 per cent. of Arsenious Acid, that is one grain in 100 grain-measures of solution.

A reddish liquid alkaline to test paper, sp. g. 1·010.

Test.—One fluid ounce (442 grains by weight), boiled for five minutes with 10 grains of Bicarbonate of Sodium, and when cold diluted with 6 fluid ounces of Water, to which a solution of Starch has been added, does not give with the volumetric solution of Iodine a permanent blue colour until 875 grain-measures have been added.

(Belg. Brit. Dan. Fr. Ger. Russ. and U.S. 1 Arsenious Acid in 100; Austr. 1 in 90.).

Dose.—2 to 8 minims twice or thrice a day in water with meals.

10 minims are used for each subcutaneous injection.

LIQUOR ARSENICI HYDROCHLORICUS. Colourless. [ALTERED.]

Arsenious Acid, 87 grs.; Hydrochloric Acid, 2 fl. drms.; Distilled Water, 20 oz.: boil the two Acids with 4 oz. of the Water until a solution is effected, then add sufficient Water to make up 20 oz.

Same strength as the Liquor Arsenicalis.
=(1 grain of Arsenic in 110 minims)

The strength of this preparation is also altered to 1 per cent.

A colourless liquid, acid to test paper, sp. g. 1·010.

Test.—Same as above, but using 20 grains instead of 10 grains of Bicarbonate of Sodium.

(Brit. and U.S. 1 of Arsenious Acid in 100).

Dose.—2 to 8 minims.

LIQUOR ARSENII ET HYDRARGYRI IODIDI. *See* ARSENII IODIDUM.

ARSENIAS FERRI.—*Dose*, 1/16 gr. *See* FERRI ARSENIAS.

ARSENIAS SODII.—*See* SODII ARSENIAS.

ARSENIATIS SODII LIQUOR.
1 grain in 109 minims. *Dose*, 5 to 10 minims. } *See* SODII ARSENIATIS LIQUOR.

Not Official.

Liquor Ammoniæ Arsenitis was preferred by the late Mr. Gaskoin, and made of the same strength as Liquor Arsenicalis; Carbonate of Ammonia being substituted for Carbonate of Potash.

The Solutio Solventis Mineralis of Dr. De Valangin (the Liquor Arsenici Chloridi of the London Pharmacopœia) contains 30 grains of Arsenic dissolved by 90 minims of Hydrochloric Acid in 20 ounces of Water; is about one-third of the strength of the British Pharmacopœia. *Dose.*—3 minims three times a day, increasing to 10 minims for chorea.

Arsenical Paste for Dentists.—Arsenious Acid, 2; Sulphate of Morphia, 1; Creasote to make a stiff paste. A quantity of the size of a pin's head is ample for one application. It should be spread on cotton-wool and placed in the tooth. It will thus destroy the sensibility of a carious tooth, and in a few hours the tooth is ready for stopping. Cocaine if applied before the arsenical paste prevents the pain.

Arsenical Paste (Frères Come's), for cancer, is applied after the surface has been laid bare by the application of caustic potash. Arsenic, 1; Charcoal, 1; Red Sulphuret of Mercury, 4; Water, *q. s.*

Arsenical Caustic Powders each contain from 1/16 gr. to 1/8 gr. of Arsenious Acid to 1 gr. of Calomel, Vermilion, or Sulphuret of Antimony, or of any combination of them.

ACIDUM BENZOICUM.

BENZOIC ACID.

Syn.—Flowers of Benzoin; Hydrate of Benzoyl.

$HC_7H_5O_2$, eq. 122.

In light feathery flexible crystalline silky plates and needles, nearly colourless, having an aromatic odour resembling that of Benzoin; obtained from Benzoin by sublimation.

Solubility, 1 in 430 of Water; 1 in 12 of boiling Water; 1 in 2¾ of Rectified Spirit; 1 in 2¾ of Ether; nearly 1 in 6 of Chloroform; 1 in 12 of Benzol; 1 in 45 of Glycerine; 1 in 12 of Glycerine at 212° F. Soluble also in Caustic Alkalies and in hot Milk of Lime, forming Benzoates. Borax increases its solubility in Water; 1 of Borax and 1 of Acid are soluble in 100 of Water; Phosphate of Sodium also aids its solution.

Test.—When heated it sublimes, leaving only a slight residue.

(Belg. Dan. Fr. Ger. Russ. and U. S.; not in Austr.).

Medicinal Properties.

Stimulant, expectorant; said to cure nocturnal incontinence of urine, given in 5 or 6 grain doses for inflammation of the bladder, frequently at first, afterwards at longer intervals and in diminished doses.

Dr. Alexander Ure has pointed out that this Acid changed Uric into Hippuric Acid; it possesses antiseptic properties. A saturated solution in water delays decomposition of animal fluids. It is also useful in preventing fats from becoming rancid.

Stimulates the liver, but its action is less rapid and less powerful than that of its salts.—Dr. Rutherford.

Dose.—5 to 15 grs.: best given wrapped in wafer-paper, or in Cachets Limousin, or in pills made up with a mixture of equal parts Treacle and liquid Glucose.

Used in the preparation of Ammonii Benzoas; Tinct. Camphoræ Composita, 2 grs. in each ounce; and Tinct. Opii Ammoniata, 9 grs. in each ounce.

Preparation.

TROCHISCI ACIDI BENZOICI. [NEW.]

Benzoic Acid, made into a lozenge with Sugar and Gum Acacia. Each lozenge contains half a grain of Benzoic Acid.

Dose.—1 to 5 lozenges.

ACIDUM BORICUM.

BORIC ACID.

Syn.—BORACIC ACID.

H_3BO_3, eq. 62.

[NEW.]

Is obtained by the action of Sulphuric Acid on Borax; also by the purification of native Boric Acid.

Solubility, 1 in 25 of cold Water; 1 in 3 of boiling Water; 1 in 4 of Glycerine; 1 in 30 of Alcohol.

Its solution turns blue litmus red and turmeric paper brown, which latter is unchanged in the presence of Hydrochloric Acid. The Alcoholic solution burns with a flame tinged with green.

Tests.—Its aqueous solution should not give more than a faint opalescence with Chloride of Barium (Sulphates), Nitrate of Silver (Chlorides), or Oxalate of Ammonium (Calcium); nor yield any precipitate with Sulphide of Ammonium (metals), nor give a strong persistent yellow tinge to a spirit or air-gas flame (Sodium).

(Belg. Dan. Fr. Ger. Russ. and U.S.; not in Austr.).

Medicinal Properties.

Antiseptic; it is used as an eye-wash, also as a dressing for granulating and suppurating surfaces in general.

B. P. Dose.—5 to 10 grains.

Preparation.

UNGUENTUM ACIDI BORICI. [NEW.]

Boric Acid in fine powder, 1; Soft Paraffin, 4; Hard Paraffin, 2; melt the Paraffins together, and sift the Boric Acid over the surface of the liquid, then stir together until cold.

BORIC ACID and OINTMENT are now included in B. P.; were "Not Official" in Companion 1880.

Not Official.

LOTIO ACIDI BORICI (pro oculis).—Boric Acid in fine powder, 2 grs.; Water, 1 oz.; dissolve.

UNGUENTUM ACIDI BORICI (pro oculis).—Boric Acid in fine powder, 2 grs.; Spermaceti Ointment, 1 oz.; mix.

LINTEUM ACIDI BORICI.—Lint dipped in a hot saturated aqueous solution of Boric Acid and then dried. Used as an antiseptic dressing for wounds and ulcers.

ACIDUM CARBOLICUM.

CARBOLIC ACID.

Syn.—PHENIC ACID; PHENOL; PHENIC ALCOHOL.

HC_6H_5O, eq. 94.

(Colourless, or having a very slight reddish or brownish tinge. Sp. g. 1·060—1·066 at the melting point, which should not be lower than 91·5° F. (33° C.). Boiling point should not be higher than 371° F. (188·3° C.). 100 parts should dissolve 30 to 40 of Water, and are dissolved by 1800 to 1200 of Water. The aqueous solution should be clear and colourless, or nearly so; any insoluble brown matter separating as dark oily drops which should not have more than a faint tarry odour. (*British Pharmacopœia*, 1885).

We have examined several samples of Carbolic Acid, and not one melted below 95° F.; the majority melted above 100° F.

Carbolic Acid, or Phenol, is prepared in a crude state by treating certain oils, heavier than water, obtained in the distillation of Coal Gas Tar, with a dilute solution of caustic Soda, subsequent separation of the crude Carbolic Acid from the alkaline solution by the addition thereto of a mineral Acid (usually Sulphuric). The crude Carbolic Acid thus obtained is submitted to fractional distillation and crystallisation, with other purification processes, having for their object the entire removal of the last traces of Cresylic and other Tar Acids and Bases, Sulphur compounds, &c.

Pure Carbolic Acid, when freshly prepared, fuses at 108° F. (42·25° C.), and boils at 359·6 F. (182° C.): 100 parts dissolve in 1200 parts of Distilled Water at 60° F.; 100 parts will dissolve 29 parts of Water at 60° F.

Cresol enters very largely into the composition of the cheaper kinds of liquid Carbolic Acid used as a disinfecting fluid. It is said to be scarcely inferior to Carbolic Acid as a disinfectant, but more irritating when applied in lotions as a dressing to wounds.

Pure Carbolic Acid is supplied in three states—Glacial, Granular, Liquid—the last being made by mixing 9 of acid with 1 of water, and the following methods have been employed for testing this liquid:—

100 c. c. are put into a retort and distilled; the first 30 c. c. of the distillate are rejected, and the next 30 c. c. are examined for the melting point, which should not be lower than 105° F. (45·5° C.).

When a small quantity of this solution—say 2 fluid drachms, in a test tube clean and dry, and a thermometer dipping into the solution—are placed in cold water about the temperature of 45° F., and gently stirred, it becomes a mass of crystals, and it again becomes a clear solution when the temperature rises to 55° or 56° F. (13° C.).

Solubility, 1 in 13 of Water, and will not separate when more Water is added; 1 in 2 of Olive Oil; 3½ in 1 of Glycerine; 3 in 1 of Chloroform; 4 in 1 of Ether; 6 in 1 of Rectified Spirit; 2¼ in 1 of Benzol; 2½ in 1 of Bisulphide of Carbon; freely in Liquor Potassæ and Liquor Sodæ; freely in Volatile Oils.

When 1, 2, or 3 parts of melted Carbolic Acid are mixed with 1 of Water, the Acid separates on cooling in oily-like globules; but when

4, 5, 6, 7, 8, and even 9 of Acid to 1 of Water are mixed, the solution is perfect at ordinary temperatures; when, however, the temperature sinks to 40° F. or under, the 8 and the 9 will crystallize out again.

Tests.—The principal tests for the quality of Carbolic Acid are the odour, which is characteristic, the melting point, and the solubility in water. It coagulates Albumen; it does not redden Litmus, and does not affect a ray of polarised light.

Melting Point (Centigrade) compared with foreign Pharmacopœias:

Austr. 33°; Belg. 41°; Brit. 33°; Dan. 35°; Fr. 42°; Ger. 35°—44°; Russ. 40°—44°; U.S. 36°—42°.

Boiling Point (Centigrade) compared with foreign Pharmacopœias:

Austr. under 187°; Belg. 182°; Brit. under 188·3°; Dan. not given; Fr. 187°—188°; Ger. 180°—184°; Russ. 182°; U.S. 181°—186°.

Medicinal Properties.

Given to check sickness, to arrest diarrhœa, to remove intestinal worms; useful in some stages of phthisis; for psoriasis 3 grs. in water three times a day are taken, and itching greatly relieved. It has been used with advantage in hooping cough internally as well as by inhalation, also as a disinfectant, sprinkled about the room. It produces profuse perspiration, lowers the pulse, and is thus useful in fever, scarlatina, measles, and small-pox. It is not indicated in typhus. Used as a gargle (2 grs. to 1 oz.) for sore throat attended with fœtor of breath; if used with a spray apparatus, 20 grains in an ounce of Water; or for inhalations, 15 grs. dissolved in a pint of hot Water; as an injection (1 gr. to 4 oz. of Water) for the vagina or the bladder, to correct putrescence. Externally, used alone is a powerful caustic; as a lotion (15 to 30 grs. to 1 oz.) for foul or syphilitic ulcers, carbuncles, scabies, and lepra; (5 grs. to 1 oz.) excellent for eczema and eruptions attended with itching; or an ointment (30 grs. to 60 grs. to 1 oz. of Benzoated Lard).

1 of Acid in 20 of Water or Olive Oil, for dressing lacerated wounds, scalds, and burns. Sir Joseph Lister prefers water; he uses 1 in 40 of Water to dip his fingers in to preserve him from injury when handling infectious sores.

$\frac{3}{4}$ gr. of Crystallized Acid dissolved in 20 drops of Water for hypodermic injection.

Dose.—1 to 3 grains in pill twice or three times a day.

We find that 12 grs. of Carbolic Acid makes a nice pill mass with 18 grs. of Liquorice Powder.

ANTIDOTES.—Stomach-pump, Emetics. Diluted Sulphuric Acid, Albumen, Saccharated Solution of Lime; Olive or Castor Oil, strong Tea or Coffee, to counteract narcotism.

Preparations.

ACIDUM CARBOLICUM LIQUEFACTUM. [NEW.]

Carbolic Acid liquefied by the addition of 10 per cent. of Water. A colourless or very slightly reddish or brownish liquid, having the taste, odour, &c., of Carbolic Acid.

Sp. g. 1·064—1·067 at 60° F. (15·5° C.), boiling point gradually rising to a temperature not higher than 371° F. (188·3° C.).

It dissolves 18 to 26 per cent. of Water (at 60° F.), yielding a clear, or nearly clear, solution, from which any slight coloured impurity contained previously in the Acid separates. (*Brit. Pharm.*)

Some tests which we have used are given under Acidum Carbolicum.

Now included in B. P.; has been in general use for some years.

German Pharmacopœia, 100 Carbolic Acid; 10 Water; mix. A clear, colourless liquid, having the odour of Carbolic Acid, and forming a clear solution with 18 parts of Water.

1 grm. dissolved in Water to measure one litre, of this solution not more than 51·6—52·6 c. c. should be required to combine with the Bromine set free from a mixture consisting of 50 c. c. each of the volumetric solutions of Bromate and Bromide of Potassium and 5 c. c. of Sulphuric Acid. The filtered liquid should no longer impart a blue colour to paper impregnated with volumetric Starch solution, Ph. Ger.

(Acidum Carbolicum Solutum.—Fr. 1 in 100, also 1 in 1000; Russ. 1 in 100).

GLYCERINUM ACIDI CARBOLICI. Colourless.

Carbolic Acid, 1; Glycerine, 4: rub together till dissolved.
(By weight 1 in 6, by measure 1 in 4¾).

Dose.—5 to 10 minims in water.

(Not in Austr. Belg. Dan. Fr. Ger. Russ. and U.S.).

Mixed with an equal bulk of water, may be applied to the tonsils when turgid, or when there is a diseased state of mucous surface producing fœtor of breath; also in diphtheria, assisted by a nutritious diet.

SUPPOSITORIA ACIDI CARBOLICI CUM SAPONE. [ALTERED.]

Carbolic Acid, 12 grs.; Curd Soap in powder, 180 grs.; Glycerine of Starch, 40 grs., or a sufficiency; to be divided into 12 conical suppositories.

Note.—This formula has been altered as suggested in our last edition.

Each conical suppository will contain 1 grain of Carbolic Acid.

(Not in Austr. Belg. Dan. Fr. Ger. Russ. and U.S.).

UNGUENTUM ACIDI CARBOLICI. [NEW.]

Carbolic Acid, 1; Soft Paraffin, 12; Hard Paraffin, 6; melt and stir together constantly until cold. = (1 in 19).

(U.S., Carbolic Acid, 1; Ointment, 9. The latter is made with 4 pts. of Lard and 1 of Yellow Wax.)

(Not in Austr. Belg. Dan. Fr. Ger. and Russ.).

Now official in B. P.; was a "Not Official" in Companion 1882.

Not Official.

Acidum Carbolicum Crudum.—Belg. Ger. Russ. and U.S. A yellowish, yellowish brown, or reddish brown liquid, having a strongly empyreumatic and disagreeable odour.

Solution de Phenate de Soude.—(Codex) Phenol, 70; Solution of Caustic Soda (sp. g. 1·332), 100; Water to measure, 1000.

Camphor Phénique is an oily liquid, obtained by dissolving Powdered Camphor in Crystallized Carbolic Acid dissolved in a small quantity of Alcohol (9 Acid to 1 Alcohol). 25 grammes Camphor in powder make 35 grammes Camphor Phénique.

This liquid is miscible in all proportions with Alcohol, Ether, and Oil of Almonds.

It is applied to false membranes in diphtheria, either pure or mixed with an equal volume of Oil of Almonds.

It may be used at first every two hours, and afterwards three or four times a day. —*Bulletin de Thérapeutique.*

Lotio Acidi Carbolici. Carbolic Acid, 30 grs.; Water, 8 oz. This lotion applied to mosquito bites relieves the itching, pain, and swelling. If mixed with a little Glycerine and sponged over the face and hands before retiring to rest, the mosquitoes will not bite until the Acid be thoroughly evaporated by the heat of the skin.—*Lancet*, Aug. 24, 1878.

Carbolic Acid Putty is made by first mixing 1 of Acid with 4 of boiled Linseed Oil, and adding Chalk till of the consistence of Putty.

Carbolic Antiseptic Dressings.—Absorbent Wool, Gauze, Jute, Tow, Protective Oiled Silk, Jaconet Bandages, and Plaster.

Gauze imbued with Carbolic Acid is also used to lay over the sores to prevent any putrid effluvia arising, as well as to protect the sores from atmospheric influence.

Catgut ligatures are kept in Carbolized Oil for surgical use.

The Sulphocarbolates have been given in zymotic diseases with benefit.

Sulphocarbolic Acid is formed by the action of Sulphuric Acid upon Carbolic Acid. (Gmelin's "Chemistry," vol. xii. 1857. See also *Medical Press and Circular*, May 25, 1870.)

Sulphocarbolates of Ammonia, of Magnesia, of Potash, and of Soda, all crystallize in tufts of acicular crystals more or less white; Sulphocarbolate of Copper, in transparent light blue interlacing prisms; of Iron, in small brown micaceous crystals; of Zinc, in transparent rectangular colourless plates.

The Sulphocarbolates of Sodium and Zinc are now official, *see* SODII SULPHOCARBOLAS AND ZINCI SULPHOCARBOLAS.

ACIDUM CHROMICUM.

CHROMIC ACID OR CHROMIC ANHYDRIDE.

CRO_3, eq. 100·4.

[NEW.]

This anhydride may be obtained by adding strong Sulphuric Acid to Bichromate of Potassium. It occurs in crimson-red needles, and is very deliquescent.

Now official in B. P.; was a "Not Official" in Companion 1880.

Solubility, about 2 in 1 of Water; Alcohol decomposes it.

It is a powerful oxidising agent, and is liable to cause sudden combustion or explosion in contact with strong Alcohol, Glycerine, and some other oxidisable substances.

Test.—1 or 2 grains dissolved in 2 or 3 ounces of Water should afford only a faint opalescence with Chloride of Barium. This test is intended to limit the Sulphuric Acid to a trace, but it requires the addition of Hydrochloric Acid, as ordered in the U.S. P.

U.S. Pharm.—1 grm. Chromic Acid dissolved in 100 c. c. of cold Water and mixed with 10 c. c. of Hydrochloric Acid, the further addition of 1 c. c. of test solution of Chloride of Barium should cause not more than a white turbidity.

Belg. Pharm.—An aqueous solution, boiled with Hydrochloric Acid and a small quantity of Alcohol, gives only a slight precipitate with Chloride of Barium. The object of the Alcohol is to decompose the Chromic Acid before the addition of the Chloride of Barium.

It is of great importance for its use as a caustic that Chromic Acid should be as free as possible from Sulphuric Acid.

Medicinal Properties.

It is a powerful caustic (1 in 1 of Water), and is used in the French hospitals by means of a glass rod, great care being taken to protect the adjacent parts by plaster or ointment, having moist lint ready to absorb any superfluous Acid; it removes warty excrescences; 1 in 8 of Water may be applied to indolent ulcers, and 1 in 2000, or even

4000, is used to wash putrid sores, cancers, &c., so powerful are its antiseptic properties.

A warm concentrated solution rapidly dissolves all animal tissues.

Preparation.

LIQUOR ACIDI CHROMICI. [NEW.]

Chromic Acid, 1; Distilled Water, 3; dissolve. = (1 in 3½).

An orange red, inodorous, caustic, strongly acid liquid.

Sp. g. 1·185. Contains (by weight) 25 per cent. of Chromic Anhydride, CrO_3, or 29·5 per cent. of real Chromic Acid, H_2CrO_4.

(Belg. and Fr.—Chromic Acid, 1; Distilled Water, 1; dissolve. Sp. g. 1·470).

Not Official.

ACIDUM CHRYSOPHANICUM.

See CHRYSAROBINUM.

ACIDUM CITRICUM.

CITRIC ACID.

$H_3C_6H_5O_7.H_2O$, eq. 210.

A colourless crystalline acid obtained from Lemon Juice, or from the Juice of the fruit of *Citrus Bergamia*, the Lime.

Solubility, 10 in 6 of Water; 1 in 2 of Glycerine; 10 in 15 of Rectified Spirit; 1 in 50 of Ether; almost insoluble in Benzol and Chloroform.

When heated to 212° F. (100° C.) it melts and gradually loses 8·6 per cent. of its weight.

Tests.—70 grains dissolved in Water require for neutralization 1000 grain-measures of the volumetric solution of Soda. It leaves no ash when burnt with free access of air. Its aqueous solution added to an excess of Lime Water, the mixture remains clear until boiled, when a white precipitate separates; it is not darkened by Sulphuretted Hydrogen, and gives no precipitate when added in excess to a solution of Acetate of Potassium, or Chloride of Barium—indicating absence of metals, Oxalic, Tartaric, and Sulphuric Acids.

Acid, 1, dissolved in Distilled Water, 11, is a substitute for Lemon Juice, but does not keep long without spoiling.

17 grs. of Citric Acid	neutralize about	24¼	grs.	Bicarbonate of Potassium
		20	,,	Carbonate of Potassium.
		20½	,,	Bicarbonate of Sodium.
		34¾	,,	Carbonate of Sodium.
		14¼	,,	Carbonate of Ammonium.
		11¾	,,	Carbonate of Magnesium.

(Austr. Belg. Dan. Fr. Ger. Russ. U.S.)

Medicinal Properties.

Refrigerant; allays thirst and irritation of the skin.

Prescribed in powders to be taken with each dose of an alkaline mixture during effervescence; or in solution, directing the quantity to be taken with the alkaline mixture.

Dose.—10 to 30 grs. in a wineglassful of Water.

Incompatibles.—Tartrate of Potash, Alkaline Carbonates, Acetates, and Sulphurets.

Contained in Ammonii Citratis Liquor, Bismuthi Citras, Bismuthi et Ammonii Citratis Liquor, Ferri et Ammonii Citras, Ferri et Quininæ Citras, Lithii Citras, Potassii Citras, Sodii Citro-Tartras Effervescens, Succus Limonis, Syrupus Limonis, Vin. Quininæ, and in all the granular effervescing Citrates.

Not Official.

Syrupus Acidi Citrici.—
Belg.—Citric Acid, 20; Syrup, 960; Water, 20; Spirit of Lemon, 1.
Fr.—Citric Acid, 10; Syrup, 980; Water, 10.
U.S.—Citric Acid, 8; Syrup, 980; Water, 8; Spirit of Lemon, 4.
Russ.—Citric Acid, 3; Sugar, 96; Water, 54; Elaeosacchari Citri, 1.

ACIDUM GALLICUM.

GALLIC ACID.

$H_3C_7H_3O_5.H_2O$, eq. 188.

Crystalline in acicular prisms or silky needles generally of a pale fawn colour. Prepared from Galls.

Solubility, 1 in 100 of cold Water; 1 in 3 of boiling Water; 1 in 8 of Rectified Spirit; 1 in 50 of Ether; 1 in 20 of Glycerine, or with heat, 1 in 5.

A solution in Rectified Spirit would be a convenient form for keeping it, as it will mix in any proportion with Water without separating; but it becomes brown by keeping.

The Crystalline Acid, when dried at 212° F. (100° C.), loses 9·5 per cent. of its weight.

Tests.—Its aqueous solution reddens Litmus, and gives a bluish-black precipitate with a persalt of Iron; it gives no precipitate with Solution of Gelatine (absence of Tannic Acid). It leaves no residue when burnt with free access of air (absence of earthy matters).

If 5 c. c. of a cold saturated aqueous Solution of Gallic Acid be treated in a watch-glass with *not more than* 2 drops of Solution of Potash a deep green colour will gradually be developed, which is changed to purple-red by acids.

(Belg. Fr. and U.S.; not in Austr. Dan. Ger. or Russ.)

Medicinal Properties.

Astringent; given in all cases where the bleeding vessels must be reached through the circulation; it is considered by some to be more effective than Tannic Acid. It is given in pyrosis and the night sweats of phthisis, and is very effective in albuminuria.

Dose.—3 to 10 grs., with twice its weight of Sugar, to be taken three times a day in Water, in powders, or may be folded in wafer-paper; 10 to 60 grs. every five hours in albuminuria, when the urine is of low specific gravity. It is also given in pills: 30 grs. of Acid and 3 minims of Glycerine will make 6 pills.

Incompatibles.—Spiritus Ætheris Nitrosi, Metallic Salts.

Preparations.

GLYCERINUM ACIDI GALLICI. Yellow.

Gallic Acid, 1; Glycerine, 4; rub together and dissolve by a gentle heat, not exceeding that of a water-bath. Part separates after cooling, and remains undissolved.

(By weight 1 in 6, by measure 1 in 4½).

Dose.—10 to 60 minims.

(Not in Austr. Belg. Dan. Fr. Ger. Russ. or U.S.)

Note.—Professor Thorpe has shown that Gallic Acid, when heated with Glycerine to 190°—200° C. (374°—392° F.), is rapidly converted into Pyrogallic Acid.

Not Official.

Unguentum Acidi Gallici, U.S.—Gallic Acid, 1; Benzoinated Lard, 9; rub together.

ACIDUM HYDROBROMICUM DILUTUM.

DILUTED HYDROBROMIC ACID.

[NEW.]

A colourless and odourless liquid, containing 10 per cent. by weight of gaseous or real Hydrobromic Acid, **HBr**, eq. 81.

The British Pharmacopœia recommends Bromine to be acted upon by Sulphuretted Hydrogen, then filtration and distillation.

Squibb's process is to pour diluted Sulphuric Acid into a strong solution of Bromide of Potassium, separate the liquid from the crystalline Sulphate of Potassium, and distil.

French Codex process is to mix diluted Sulphuric Acid with a strong solution of Bromide of Barium, filter from the Sulphate of Barium, and distil.

Dr. Fothergill gives the following formula (*Brit. Med. Journ.*, July 8, 1876):—

℥ x. ʒ vi. gr. xxviii. Bromide of Potassium dissolved in 2 pints of Water; ℥ xiii. ʒ i. gr. xxxvii. Tartaric Acid in 2 pints of Water; mix the solutions, and filter.

Dose.—30 to 60 minims in Water.

The objection to this last process is that it contains Acid Tartrate of Potassium, and therefore cannot be readily tested for strength either by specific gravity or volumetrically by Solution of Soda.

Tests.—Sp. g. 1·077. The addition of Nitrate of Silver solution causes a white precipitate, insoluble in Nitric Acid, and sparingly soluble in Solution of Ammonia. When mixed with Chlorine Water, Bromine is liberated. When volatilised by heat, it should leave little or no residue. It should not precipitate with Chloride of Barium (absence of Sulphuric Acid). It does not become coloured on keeping. 810 grains by weight require for neutralization 1000 grain-measures of the volumetric Solution of Soda.

(Fr. and U.S. 10 per cent., sp. g. 1·077; not in Austr. Belg. Dan. Ger. or Russ.)

Medicinal Properties.

Same as the Bromides. When large doses or continued use are indicated, it can be used to supplement or replace the Bromides.

Dr. Fothergill says that it prevents headache after taking Quinine or Iron, and may be given with Quinine (which it readily dissolves) for nervous exhaustion.

Dose.—15 to 50 minims, diluted with water, or syrup and water.

60 minims = $8\frac{2}{3}$ grains of Bromide of Potassium in the quantity of Bromine.

ACIDUM HYDROCHLORICUM.

HYDROCHLORIC ACID.

Syn. Acidum Muriaticum purum; Chlorhydric Acid; Spirit of Salt.

A nearly colourless liquid, containing about 32 per cent. by weight of Hydrochloric Acid gas, **HCl**, eq. 36·5.

Tests.—Sp. g. 1·160. 114·8 grains by weight, diluted with ½ oz. of Distilled Water, require for neutralization 1000 grain-measures of the volumetric Solution of Soda. When volatilized by heat it should leave no residue. With Nitrate of Silver a curdy white precipitate is formed, insoluble in Nitric Acid, but soluble in excess of Ammonia. When diluted with four times its volume of Distilled Water, it gives no precipitate with Chloride of Barium, or with Sulphuretted Hydrogen, and does not tarnish bright copper-foil when boiled with it—indicating absence of Sulphuric Acid, metals, and Arsenic. If a drop or two of dilute Solution of Sulphate of Indigo be added to half an ounce of the Acid, the latter should acquire a permanent blue tint (absence of Chlorine and Nitric Acid).

For the detection of Sulphurous Acid, *see* under ACIDUM ACETICUM, page 3.

Medicinal Properties.

Given in a very diluted form, as a refrigerant, antiseptic, and tonic; applied with an equal quantity of Water to diphtheric patches in the throat.

(Austr. 24·24 p. c., sp. g. 1·120; Belg. sp. g. 1·180; Fr. 34·4 p. c., sp. g. 1·171; Dan. Ger. and Russ. 25 p. c., sp. g. 1·124; U.S. 31·9 p. c., sp. g. 1·160.)

INCOMPATIBLES.—Salts of Silver and Lead, Tartar Emetic, Alkalies, and their Carbonates.

ANTIDOTES.—In cases of poisoning by Hydrochloric Acid, the antidotes are Chalk, Magnesia, with White of Egg, Carron Oil, or Soap-suds, followed by Enemata of Beef Tea and Brandy, with Tincture of Opium to prevent collapse; and Emollient Drinks.

Preparation.

ACIDUM HYDROCHLORICUM DILUTUM. Colourless.

Acid, 8; Distilled Water sufficient to make the mixture, when cooled to 60° F., measure 26½; or 3060 grains by weight of Acid, and Distilled Water sufficient to measure 20 oz. when cooled to 60° F. (15·5° C.)

Contains 10·58 per cent. of real Acid.

Test.—Sp. g. 1·052. Six fluid drachms (345 grains by weight) require for neutralization 1000 grain-measures of volumetric solution of Soda, indicating 1 molecular weight in grains (36½) of Hydrochloric Acid, HCl.

Three and a third minims contain about 1 minim strong Acid.

Dose.—10 to 30 minims with bitter infusions; for children, 1½ to 2 mins.; 1 drm. in 8 oz. of Infusion of Roses as a gargle for ulcerated sore throat and thrush.

(Austr. 12·4 p. c., sp. g. 1·060; Belg. sp. g. 1·040; Dan. and U.S. 10 p. c., sp. g. 1·049; Ger. 12·5 p. c., sp. g. 1·061; Russ. 8·3 p. c., sp. g. 1·040; not in Fr.)

ACIDUM HYDROCYANICUM DILUTUM.

DILUTED HYDROCYANIC ACID.

Syn. PRUSSIC ACID; CYANHYDRIC ACID.

Hydrocyanic Acid, $\mathbf{HCN}$, eq. 27, dissolved in Water, and constituting 2 per cent. by weight of the solution.

Colourless, with a peculiar odour. It only slightly and transiently reddens Litmus.

It should be kept in well-corked bottles, tied over with impervious tissue. For reasons see *Ephemeris*, Sept., 1883.

Tests.—Sp. g. ·997. 270 grains by weight of the Acid, rendered alkaline by the addition of Solution of Soda, and maintained faintly alkaline throughout the operation, require the addition of 1000 grain-measures of the volumetric solution of Nitrate of Silver before a permanent precipitate begins to form, which corresponds to 2 per cent. of real Acid. This test is that of Liebig. The addition of the Soda to the Prussic Acid produces Cyanide of Sodium, and this again becomes Cyanide of Silver when the Nitrate of Silver is dropped in: but as one equivalent of Cyanide of Silver combines with one equivalent of Cyanide of Sodium to form a soluble compound, it is only when exactly one-half of the Cyanide of Sodium has been converted into Cyanide of Silver that a permanent precipitate is produced.

Treated with a minute quantity of a mixed solution of Sulphate and Persulphate of Iron, afterwards with Potash, and finally acidulated with Hydrochloric Acid, it forms Prussian Blue. No fixed residue is left after evaporation of 60 minims of this Acid. It gives no precipitate with Chloride of Barium, but with Nitrate of Silver it gives a white precipitate entirely soluble in boiling concentrated Nitric Acid—indicating absence of Sulphuric and Hydrochloric Acids.

Medicinal Properties.

As this Acid is a dangerous poison, it should never be prescribed alone.

The vapour is sometimes applied to the eye.

It is sedative, antispasmodic, allays vomiting, is useful in gastrodynia, and in dyspeptic palpitations. Used externally to allay itching of the skin; as a lotion 2 drms. to 8 oz. of Rose Water; as an ointment from ½ drm. to 1 drm. to each ounce of Zinc Ointment.

Prescribed in Almond Emulsion for cough, and with Bicarbonate of Sodium and Peppermint Water for dyspepsia.

Dose.—2 to 8 minims.

(Belg. 2·5 per cent.; Fr. Acide Cyanhydrique Officinal 1 per cent.; Russ. and U.S. 2 per cent.; not in Austr. Dan. or Ger.)

INCOMPATIBLES.—Salts of Silver, Copper, Iron, Red Oxide of Mercury, Sulphurets.

ANTIDOTES.—In cases of poisoning, the antidotes are fresh air and artificial respiration, with cold affusion; freshly precipitated Oxide of Iron, with an Alkaline Carbonate, thus, 10 grs. of Sulphate of Iron, with a drachm of Tinct. of Iron and 1 oz. of Water, followed by 20 grs. of Carbonate of Potassium dissolved in 1 oz. of Water. This will render insoluble 110 minims of Br. Ph. Acid.

Preparation.

VAPOR ACIDI HYDROCYANICI.

Diluted Hydrocyanic Acid, 10 to 15 minims; cold Water, 60 minims; mix in a suitable apparatus, and let the vapour that arises be inhaled.

ACIDUM LACTICUM.

LACTIC ACID.

[NEW.]

A syrupy liquid, of a very pale yellow colour, and very sour taste, containing about 75 per cent. of $HC_3H_5O_3$, eq. 90. It is produced by the action of a peculiar ferment on solution of Sugar and subsequent purification of the product.

Now Official in B. P.; was a Not Official in Companion 1880.

It is miscible in all proportions with Water, Rectified Spirit, and Ether, but nearly insoluble in Chloroform.

Tests.—Sp. g. 1·210 (or, rather, 1·22). 120 grains require for neutralization 1000 grain-measures of the volumetric Solution of Soda. A solution in about 10 parts of Water, neutralized by Ammonia, is not precipitated by Sulphide of Ammonium (absence of Lead and Iron). Not more than a faint opalescence is produced with Chloride of Barium (Sulphates), Nitrate of Silver (Chlorides), or Oxalate of Ammonium (Calcium), nor when boiled with excess of Fehling's Solution is any precipitate formed (absence of Sugars).

B. P. volumetric test and sp. g. do not quite agree.

(Belg. and Fr. sp. g. 1·215; Ger. sp. g. 1·21—1·22; Russ. sp. g. 1·236—1·240; U.S. sp. g. 1·212; not in Austr. or Dan.)

Medicinal Properties.

It is used as a spray in diphtheria, 1 part to 16 parts of Water.

Preparations.

ACIDUM LACTICUM DILUTUM.

Lactic Acid, 3; Distilled Water sufficient to produce 20.

Tests.—Sp. g. 1·040. 800 grains by weight require for neutralization 1000 grain-measures of the volumetric Solution of Soda.

Dose.—30 to 120 minims.

Not Official.

SYRUPUS CALCIS LACTOPHOSPHATIS.

(Fr. Codex.—Bicalcic Phosphate, 12·5; Lactic Acid, q.s. (about 14); Distilled Water, 340; Sugar, 630; Alcoolature de Citron, 10. All by weight. It contains 1·25 per cent. Bicalcic Phosphate.)

(U.S. Ph.—Precipitated Phosphate of Lime, 22; Lactic Acid, 33; Orange-flower Water, 80; Sugar, 600; Water sufficient to make 1,000. All by weight. It contains about 2 per cent. of Phosphate of Lime.)

ACIDUM MECONICUM.

MECONIC ACID.

$H_3C_7HO_7$ eq. 200.

[NEW.]

An Acid obtained from Opium in micaceous crystals.

Solubility, 1 in 150 of Water; it is decomposed by boiling water; 1 in 45 of Rectified Spirit.

Tests.—It is coloured red by neutral solution of Perchloride of Iron, the colour being discharged by strong but not by diluted Hydrochloric Acid. The aqueous solution gives no precipitate with solution of Iodine and Iodide of Potassium (absence of Alkaloids).

Used only to prepare the *Official* Liquor Morphinæ Bimeconatis.

ACIDUM NITRICUM.

NITRIC ACID.

Syn. Azotic Acid.

Colourless. Contains 70 per cent. by weight of real Acid, $\mathbf{HNO_3}$, eq. 63.

Tests.—Sp. g. 1·420. Boiling Point 250° F. (121° C.) 90 grains by weight, mixed with half an ounce of Distilled Water, require for neutralization 1000 grain-measures of the volumetric Solution of Soda. When evaporated to dryness, it leaves little or no residue. If it be poured upon copper filings, dense red fumes are formed. Diluted with six volumes of Distilled Water, it gives no precipitate with Chloride of Barium or Nitrate of Silver—indicating absence of Sulphuric and Hydrochloric Acids.

5 measures of Acid, sp. g. 1·500, and 2 of Water mixed, condense into 6¼ measures, and make the sp. g. 1·420.

Medicinal Properties.

It is strongly corrosive, and is applied as a caustic to phagedænic sores and chancres by means of a pointed glass rod. When diluted it is refrigerant, tonic, and antiseptic; and if very much diluted forms a drink in febrile diseases, especially typhus, and is used also as an injection in phosphatic calculus.

(Austr. sp. g. 1·300; Belg. sp. g. 1·330; Dan. sp. g. 1·180; Fr. sp. g. 1·390; Ger. sp. g. 1·185; Russ. sp. g. 1·200; U.S. sp. g. 1·420.)

Incompatibles.—Alcohol, Alkalies, Oxides, Sulphate of Iron, Acetate of Lead, all Carbonates and Sulphurets.

Antidotes.—In case of poisoning by Nitric Acid, the antidotes are Chalk, Magnesia, with White of Egg, Carron Oil, or Soap-suds, followed by Enemata of Beef Tea and Brandy, with Tinct. of Opium to prevent collapse; emollient drinks.

Preparation.

ACIDUM NITRICUM DILUTUM. Colourless.

Nitric Acid, 6; Distilled Water sufficient to make the mixture, when cooled to 60° F. (15·5° C.), measure 31; or 2400 grains by weight of Acid, and Distilled Water sufficient to measure 20 oz. when cooled to 60° F. (15·5° C.) Colourless. Contains 17·44 per cent. of real Acid.

Test.—Sp. g. 1·101. Six fluid drachms (361·3 grains by weight) require for neutralization 1000 grain-measures of volumetric solution of Soda, corresponding to one molecular weight in grains (63) of real Acid, $\mathbf{HNO_3}$.

Dose.—10 to 30 minims. For Children 1½ min.

5 minims contain about 1 minim of strong Acid.

Prescribed with bitter infusions and Tincture of Orange. Infusion of Roses made with this Acid, instead of Sulphuric Acid, and sweetened, is the most elegant form for administering Quinia with this astringent. Sulphuric Acid, by precipitating the Tannate of Quinia, makes a turbid mixture (*Pharm. Journ.*, vol. i. p. 585).

(Austr. sp. g. 1·130; Belg. sp. g. 1·120; Russ. sp. g. 1·096; U.S. sp. g. 1·059; not in Dan. Fr. or Ger.)

ACIDUM NITROHYDROCHLORICUM DILUTUM.

DILUTED NITRO-HYDROCHLORIC ACID.

[ALTERED.]

Nitric Acid, 3; Hydrochloric Acid, 4; Water, 25. Add the Acids to the Water, and keep the mixture in a glass stoppered bottle for fourteen days before it is used. Colourless.

Test.—Sp. g. 1·070. 6 fluid drachms (352 grains by weight) require for neutralization about 883 grain-measures of the volumetric Solution of Soda.

16 minims equal 1½ minim of Nitric Acid and 2 minims of Hydrochloric Acid.

Medicinal Properties.

Tonic, stomachic, alterative. Externally as a lotion or bath, for obstructions of the liver.

Is an hepatic stimulant of considerable power.—Dr. Rutherford.

Dose.—5 to 20 minims in 1½ oz. Water, and for children 1 min. with Succus Taraxaci, or Tinct. Aurantii.

U.S. orders the' undiluted—Nitric Acid, 4; Hydrochloric Acid, 15; also the diluted—Nitric Acid, 4; Hydrochloric Acid, 15; Water, 76.
Russ. orders the undiluted—Nitric Acid, 1; Hydrochloric Acid, 3.
Fr. Eau Regale—Nitric Acid, 8; Water, 2; Hydrochloric Acid, 30.
Dublin Pharmacopœia was—Nitric Acid, 1; Muriatic Acid, 2.
(Not in Austr. Belg. or Ger.)

ANTIDOTE.—Albumen freely administered, after evacuating the stomach.

Directions for Preparing and Using the Bath.

Mix 8 ounces by measure of diluted Nitro-hydrochloric Acid with 1 gallon of pure Water, temperature 96° or 98° F. Let a flannel roller* of ten or twelve inches wide, and sufficient to encircle the body twice, be soaked in the fluid and then wrung, so as to remain only damp. Apply this instantly to the body, covering it with a piece of oiled silk to avoid damping the dress. It should be worn constantly, but should be changed, soaked, and wrung, morning and evening. Glass, glazed earthenware, or wooden vessels should be used. Sponges and towels to be kept in Water to prevent them corroding.

ACIDUM OLEICUM.

OLEIC ACID.

[NEW].

A fluid fatty Acid, $\mathbf{HC_{18}H_{33}O_2}$, usually not quite pure, obtained by the saponification of Olein, or by the action of superheated steam on fats, with subsequent separation from solid fats by pressure.

Now included in B. P.; was a Not Official in Companion 1882.

A straw-coloured liquid nearly odourless and tasteless and with not more than a very faint acid reaction; unduly exposed to air it becomes brown and decidedly acid.

Sp. g. 0·860—0·890. It becomes semi-solid at 40° to 41° F. (4·5° to 5° C.), melting again at 56° to 60° F. (13·3° to 15·5° C.). Soluble in all proportions of Alcohol, Chloroform, Ether, Benzol, Oil of Turpentine, and fixed oils. Insoluble in Water.

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* These, with the oiled silk attached, can be had of the chemists ready made.

Tests.—At a gentle heat the Acid is completely saponified by Carbonate of Potassium; this salt dissolved in water, carefully neutralized with Acetic Acid, and treated with Solution of Acetate of Lead, should yield a white precipitate, which after being washed with boiling water is almost entirely soluble in Ether (absence of more than traces of Palmitic and Stearic Acids).

Equal volumes of Oleic Acid and Rectified Spirit heated to 77° F. (25° C.) should give a clear solution, without separation of oily drops upon the surface (fixed Oils).

(U.S. sp. g. 0·800 to 0·810, but tests and sp. g. do not agree. Not in Austr. Belg. Dan. Fr. Ger. or Russ.)

Used in pharmacy for dissolving Oxide of Mercury, Oxide of Lead, Oxide of Zinc, and the alkaloids Morphine, Aconitine and Atropine; but the true Oleates are best formed by double decomposition.

Preparations.

OLEATUM HYDRARGYRI. [NEW.]

Yellow Oxide of Mercury, 1; Oleic Acid (by weight), 9. To the Oleic Acid kept stirred in a mortar, add gradually the Oxide of Mercury, and triturate occasionally until it is all dissolved.

A light brown, oleaginous, semi-solid substance, composed of Oleate of Mercury and Oleic Acid. When gently warmed no black precipitate should separate.

This Oleate may be prepared with half the above proportion (4) of Oleic Acid (forming the 20 per cent. preparation), the remainder being added just before, or not long before, the Oleate is dispensed. The 20 per cent. preparation keeps better than the 10 per cent., and that again better than the 5 per cent. which is sometimes ordered.

Now included in B. P.; was a Not Official in Companion 1877.

OLEATUM ZINCI. [NEW].

Oxide of Zinc, 1; Oleic Acid (by weight), 9; stir the Oxide with the Oleic Acid and allow the mixture to stand for two hours; then heat on a water bath until the Oxide is dissolved.

Now included in B. P.; was a Not Official in Companion 1880.

UNGUENTUM ZINCI OLEATI. [NEW.]

Oleate of Zinc, 1; Soft Paraffin, 1: mix with a little heat, and stir till nearly cold.

ACIDUM PHOSPHORICUM CONCENTRATUM.

CONCENTRATED PHOSPHORIC ACID.

[NEW.]

A colourless syrupy liquid, containing Phosphoric Acid, H_3PO_4, with 33·7 per cent. of Water.

Tests.—Sp. g. 1·5. 73·8 grains by weight of it mixed with 180 grains of Oxide of Lead in fine powder leave, by evaporation, a residue (principally Phosphate of Lead), which after it has been heated to dull redness weighs 215·5 grains. Evaporated, it leaves a residue which melts at a low red heat, and upon cooling exhibits a glassy appearance. When diluted with Water, it gives a canary-yellow precipitate with Ammonio-nitrate of Silver, soluble in Ammonia and in Diluted Nitric Acid (as is the case also with aqueous Solution of Arsenious Acid); it is not precipitated by Sulphuretted Hydrogen passed through the hot solution for a few minutes, Chloride of Barium, Nitrate of Silver acidulated with Nitric Acid, or by a solution of Albumen—indicating absence of metals (particularly Arsenic), Sulphuric Acid, Hydrochloric Acid, and Metaphosphoric Acid. When mixed with an equal volume of pure Sulphuric Acid, and then introduced into a Solution of Sulphate of Iron, it does not communicate to it a dark colour—indicating absence of Nitric Acid.

Preparations.

ACIDUM PHOSPHORICUM DILUTUM. Colourless.

Contains 13·8 per cent. by weight of Phosphoric Acid, $\mathbf{H_3PO_4}$, eq. 98, corresponding to 10 per cent. of Phosphoric Anhydride, $\mathbf{P_2O_5}$, eq. 142.

Concentrated Phosphoric Acid, 3 fl. oz.; Distilled Water sufficient to make up to 20 fl. oz.: mix.

Tests.—Sp. g. 1·080. 6 fluid drachms (355 grains by weight) poured upon 180 grains of Oxide of Lead (Litharge) in fine powder, leave, after evaporation, a residue which, having been heated to redness, weighs 215·5 grains, and is principally Phosphate of Lead.

For tests of purity *see* Acidum Phosphoricum Concentratum.

Note.—Diluted Phosphoric Acid may be prepared from a concentrated Phosphoric Acid of any strength, provided the product have sp. g. 1·08, and respond to the tests.

Medicinal Properties.

Tonic and refrigerant, having properties similar to Sulphuric Acid, but more palatable, and has the property of allaying a tickling cough; it is said to correct the phosphates in the urine, and to allay thirst in diabetes. Given with Phosphate of Lime in rickets. It is also found useful in cases of vomiting and diarrhœa, arising from a bilious attack, if given in frequent doses. A valuable nerve tonic.

Dose.—10 to 30 minims largely diluted with Water; for children 1 to 2 mins.

(Dan. sp. g. 1·080 (14 p. c.); Russ. sp. g. 1·062 (12 p. c.); U.S. sp. g. 1·057 (10 p. c.); the following are *not* called Dilutum—Austr. sp. g. 1·117 (19 p. c.); Belg. and Fr. sp. g. 1·35 (50 p. c.); Ger. sp. g. 1·120 (20 p. c.); Russ. sp. g. 1·130 (22 p. c.); U.S. sp. g. 1·347 (50 p. c.)

Incompatibles.—Lime Water, Calcareous Salts, Carbonate of Sodium.

May be prescribed with some bitter and aromatic tinctures and syrups, or with Syrup of the Phosphate of Iron, but not with the Syrup of Pyrophosphate of Iron, as the mixture becomes solid.

Used to prepare Syrupus Ferri Phosphatis and several non-official formulas.

Not Official.

Acidum Phosphoricum Glaciale. Metaphosphoric Acid. HPO_3. Colourless, transparent, glass-like masses, which absorb moisture from the air, and slowly become converted into Orthophosphoric Acid.

Soluble in water; the solution coagulates albumen and gives a white precipitate with a salt of Barium.

Not Official.

ACIDUM PYROGALLICUM.

PYROGALLIC ACID. PYROGALLOL.

Usually prepared by heating Gallic Acid to 185°—200° C.

Professor Thorpe has published an easy and cheap method for making Solution of Pyrogallic Acid, by mixing Gallic Acid and Glycerine, and heating the mixture to 190° C.—200° C. (not exceeding the latter), so long as bubbles are seen to form in the liquid. (*Ph. Jl.*, May, 1881, p. 990.)

Pyrogallic Acid is in white flaky crystals, which blacken by exposure to light. It colours Ferrous Salts an intense blue, and Ferric Salts a brownish red; with alkalies it browns very quickly on exposure to air. Solubility, 1 in 2 of Water, and measures $2\frac{1}{2}$; 9 in 10 of Rectified Spirit.

Chiefly used in photography.

1 in 16 of Water is used with a solution of Nitrate of Silver 1 in 30 of Water, for blackening the hair.

British Medical Journal, Feb. 22, 1879, says a solution in Water of 2 per cent. acts as an antiseptic.

Pyrogallic Acid used in the form of a 10 per cent. salve, and applied with a brush twice a day, proved very useful in Hebra's wards in the treatment of psoriasis. The parts were then covered with cotton wadding or linen, and when very extensive were covered with flannel. (*Practitioner*, Nov., 1880.)

(Fr. and Ger.; not in Austr. Belg. Dan. Russ. or U.S.)

Unguentum Acidi Pyrogallici (Jarisch's Ointment).—Pyrogallic Acid, 60 grs.; Lard, 1 oz.: mix. *British Skin Hospital.*

ACIDUM SALICYLICUM.

SALICYLIC ACID.

$HC_7H_5O_3$, eq. 138.

[NEW.]

Salicylic Acid, in shining white needles, prepared by passing Carbonic Acid into a mixture of Carbolic Acid and Caustic Soda at a high temperature, and decomposing the Salicylate of Sodium with an Acid, and subsequent purification; or by treating Oil of Wintergreen, which is mainly composed of Salicylate of Methyl, with a solution of Caustic Potash, and distilling it, decomposing the residue with Hydrochloric Acid, and purifying the Salicylic Acid by recrystallization.

Now included in B. P.; was a Not Official in Companion 1877.

The natural acid is preferable to the artificial for internal use.

Solubility, 1 in 760 of cold Water; 1 in 9 of boiling Water; 1 in 15 of Proof Spirit; 1 in $3\frac{1}{2}$ of Rectified Spirit; 1 in 2 of Ether; 1 in 55 of Chloroform; 1 in 120 of Olive Oil; 1 in 195 of Glycerine; 1 in 8 of Lard (at 180° F.). 20 grains Salicylic Acid are rendered soluble in a fluid ounce of Water by the addition of 25 grains of Borax, or 40 grains of Citrate of Potash; but it is better to use Salicylate of Sodium.

Tests.—An aqueous solution of Salicylic Acid gives a reddish-violet colouration with Persalts of Iron. Dissolve 1 of the Acid in 10 of Rectified Spirit, and leave it to evaporate in a watchglass at the ordinary temperature of the air. It forms round the edge of the watchglass a ring of beautiful efflorescent aggregated crystals. This mass is *pure white* if the Acid used be quite pure and has been recrystallized, but yellowish if simply the precipitated Acid be used.

(Belg. Fr. Ger. Russ. and U.S.; not in Austr. or Dan.)

Medicinal Properties.

Antiseptic; useful in acute rheumatism. (*Lancet*, April and May, 1876.)

Professor German Sée considers that the doses should be spread over pretty equal intervals of the day; that it is dangerous given in the solid form. He prefers the Salicylate of Sodium, about 460 grains dissolved in 10 ounces of water, ½ ounce diluted with water four times a day until pain diminishes; then only three times a day for about a week or so, then only 1 ounce (in four doses) during the day, taken at meals, and if it causes sickness a little brandy may be added.

Dr. Maclagan (*Lancet*, June, 1879) prefers Salicin to Salicylic Acid; considers it equally good in acute rheumatism, its action being tonic, whilst the Salicylic Acid is depressing, and sometimes alarmingly so. He gives 20 to 30 grs. of Salicin every hour at first, then every two, three, or four hours as the symptoms decline.

Preparations.

UNGUENTUM ACIDI SALICYLIC. [NEW.]

Salicylic Acid, 1; Soft Paraffin, 18; Hard Paraffin, 9: melt the Paraffins, add the Acid, and stir together until cold.

SALICYLATE OF SODIUM. *See* SODII SALICYLAS.

Not Official.

UNGUENTUM ACIDI SALICYLIC.—Salicylic Acid, 30 grs.; Benzoated Lard, 1 oz.; melt over a water-bath and stir till cold.—*British Skin Hospital.*

Used for eczema, psoriasis, ringworm, and for foul ulcers.

PULVIS SALICYLICUS CUM TALCO, Ph. Ger.—Salicylic Acid, 3; Wheat Starch, 10; Talc, 87: mix to a fine powder. Used in the German Army as a preventive against perspiring and sore feet. It is applied dry, on a march daily, in garrison every two or three days.

SALICYLIC GUTTA-PERCHA PLASTER (Beirsdorf).—Possesses a solvent power on horny epidermis. (*Lancet*, Dec., 1883, p. 951.)

COLLODIUM SALICYLICUM.—Salicylic Acid, 30; Extract of Indian Hemp, 5; Flexile Collodion, 240: dissolve.

Useful in the treatment of hard and soft corns. (*Pharm. Journ.*, April, 1883, p. 884.)

ACIDUM SULPHURICUM.

SULPHURIC ACID.

A colourless oily liquid; boils at about 620° F. (326·6° C.); contains about 98 per cent. by weight of real Sulphuric Acid, $\mathbf{H_2SO_4}$, eq. 98.

Tests.—Sp. g. 1·843.* 50 grains by weight, mixed with an ounce of Distilled Water, require for neutralization 1000 grain-measures of volumetric solution of Soda. It evolves much heat on the addition of water, and when thus diluted gives a copious white precipitate with Chloride of Barium. Evaporated in a platinum crucible, leaves little or no residue; diluted with six times its volume of Distilled Water, it gives no precipitate with Sulphuretted Hydrogen; when a solution of Sulphate of Iron is poured upon it, no purple ring is formed at the junction of the two solutions—indicating absence of fixed impurities, Arsenic, and Nitric Acid. Sulphate of Lead if present falls in a white precipitate by dilution merely.

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* True Monohydrated Sulphuric Acid has a sp. g. 1·848.

Sulphuric Acid exists in two other states: a solid crystalline form, resembling Asbestos, which is used in the arts; and Nordhausen Acid, a fuming liquid, which has been employed for the cure of cancer.

Medicinal Properties.

A powerful caustic, and when so used it is made into a paste with an equal quantity of charcoal; when diluted it is tonic, refrigerant, astringent, exciting the appetite and promoting digestion; it diminishes night sweating.

(In all the Pharmacopœias, ranging from sp. g. 1·840 to 1·845.)

Incompatibles.—Alkalies and their Carbonates, Salts of Lead and Lime.

Antidotes.—In case of poisoning by Sulphuric Acid, Magnesia is preferred to Chalk. For other antidotes *see* Hydrochloric and Nitric Acids.

Preparations.

ACIDUM SULPHURICUM AROMATICUM. Elixir of Vitriol. [ALTERED.]

Contains 12·5 per cent. by weight of real Acid.

Sulphuric Acid, 3; Rectified Spirit, 36; Spirit of Cinnamon, 2; strong Tincture of Ginger, 2: mix the Acid gradually with the Spirit, and add the Spirit of Cinnamon and Tincture of Ginger.

Tests.—Sp. g. 0·911. 195 grains by weight require for neutralization 500 grain-measures of the volumetric solution of Soda.

Note.—Brit. Pharm., 1867, ordered the Cinnamon and Ginger in powder and digested the whole for seven days. It made a preparation like the old Elixir of Vitriol, a deep red. The new formula gives a pale orange brown, which will get darker by keeping.

Dose.—5 to 30 minims. Best prescribed alone, to be taken in Water.

It is used in the preparation of Infusum Cinchonæ Acidum.

(U.S. Sulphuric Acid, 200; Tincture of Ginger, 45; Oil of Cinnamon, 1; Alcohol sufficient to weigh 1000: add the Sulphuric Acid to 700 of Alcohol and allow it to cool, then add to it the Tincture of Ginger and Oil of Cinnamon, and finally enough Alcohol to make the product weigh 1000.)

Acidum Sulphuricum Alcholisatum. *See* Not Official.

ACIDUM SULPHURICUM DILUTUM. Colourless.

Contains 13·65 per cent. by weight of real Acid.

Sulphuric Acid, 7; mix gradually Distilled Water, sufficient to measure 83½ when cooled to 60° F.; or 1350 grains by weight of Acid, and Distilled Water sufficient to measure 20 oz. when cooled to 60° F.

Test.—Sp. g. 1·094. 6 fluid drachms (359 grains by weight) require for neutralization 1000 grain-measures of the volumetric solution of Soda, indicating half a molecular weight in grains (49) of real Acid, $\mathbf{H_2SO_4}$.

12 minims contain 1 minim of strong Sulphuric Acid.

Prescribed much diluted, in mixtures; or in cough linctuses, with Confection of Hips and Syrup of Mulberries.

Dose.—5 to 30 minims; for children 1 min.

(Austr. Belg. Ger. and Russ. Acid 1, Water 5, sp. g. 1·110–1·117; Dan. Acid 1, Water 7, sp. g. 1·082; Fr. and U.S. Acid 1, Water 9, sp. g. 1·067; all are by weight.)

Contained in Infusum Rosæ Acidum, 1 in 80.

Not Official.

Mynsicht's Elixir of Vitriol.—Cinnamon, Ginger, Cloves, each 3; Calamus Aromaticus, 8; Galangal, 12; Sage, 4; Peppermint, 4; Cubebs, 2; Nutmeg, 2; Aloes Wood, 1; Lemon Peel, 1; Sugar Candy, 32; Rectified Spirit, by weight, 144; Sulphuric Acid, by weight, 96. Digest for three weeks.

Dose.—5 to 10 minims.

Acidum Sulphuricum Alcoholisatum. Liquor Acidus Halleri. Aqua Rabelli.
Sulphuric Acid, 1; Alcohol (90 p. c.), 3; Austr. Belg. and Russ.
Sulphuric Acid, 1; Alcohol (90 p. c.), 3; Poppy Petals, ·04; Fr.
Sulphuric Acid, 1; Alcohol, 1; Dan.

ACIDUM SULPHUROSUM.

SULPHUROUS ACID.

Sulphurous Anhydride, SO_2, eq. 64, dissolved in water.

A colourless liquid, with a pungent sulphurous odour; contains 5 per cent. by weight of Sulphurous Acid gas, or Sulphurous Anhydride, SO_2; equivalent to 6·4 per cent. of real Acid, H_2SO_3.

It should be freshly prepared.

Tests.—Sp. g. 1·025. 64 grains mixed with 2 oz. of recently boiled and cooled Distilled Water and a little mucilage of Starch do not acquire a permanent blue colour with the volumetric solution of Iodine, until 1000 grain-measures of the latter have been added. This is a test of its strength, for if there be sufficient Sulphurous Acid it will convert the whole of the 1000 grain-measures of the volumetric solution of Iodine into Hydriodic Acid, which does not render starch blue. Evaporated, it leaves no residue.

The test of the last Pharmacopœia was much too high; it has been reduced from 9·2 p. c. to 5 p. c. of Sulphurous Anhydride.

Medicinal Properties.

It is a powerful deoxidizing agent, disinfecting and antiseptic, and destructive to vegetable life. Dr. Dewar has published a pamphlet in which he gives the successful results of its use by a vulcanite spray-producer in cases of diphtheria, sore-throat, bronchitis, toothache, and to parts affected with painful neuralgia. For this purpose it is diluted with 1 or 2 parts of Water; this strength will also answer as a lotion for wounds, cuts, ulcers, bed-sores, scalds, and burns; for gargles, 1 to 5 of Water; it destroys the germs of fungi in wounds and parasitic lichen on the skin, and is given for Sarcina Ventriculi.

Dose.—½ to 1 drm., in a wineglassful of water, three times a day, relieves constant sickness

(U.S. sp. g. 1·022—1·023 (3·5 p. c.); not in others.)

Sulphite of Sodium and Hyposulphite of Sodium will be found under "Sodium."

ACIDUM TANNICUM.

TANNIC ACID.

An Acid, extracted from Galls. In pale yellow vesicular masses or thin glistening scales.

Solubility, 10 in 5 of Water; 10 in 6 of Rectified Spirit; 3 in 1 of Absolute Alcohol; 1 in 100 of Ether; 1 in 3 of Glycerine, or if warmed, 1 in 2; sparingly in Olive Oil; almost insoluble in Benzol and Chloroform.

These solubilities were made with Tannic Acid, which was very soluble, but different samples vary in solubility.

Tests.—Exposed to heat on platinum foil it partly melts, swells up, blackens, and at length burns away with a brilliant flame, leaving no residue. The organic matter is first reduced to charcoal, and then burnt away—indicating absence of earthy matters. It strikes a bluish black colour with Persalts of Iron. It precipitates solution of Gelatine, which distinguishes it from Gallic Acid.

(Austr. Belg. Dan. Fr. Ger. Russ. and U.S.)

Medicinal Properties.

Useful when applied in the dry state to cancer; 8 grs. in 1 oz. Water, injected 3 times a day into the nostrils, is good in coryza (cold in the head). 60 grs. in 10 oz. of Rose Water to be used with a spray-producer for relaxed sore-throat. This may also be injected in chronic gonorrhœa with advantage.

Styptic, astringent, in uterine hæmorrhage, dysentery, and diarrhœa.

Does not affect the secretion of the bile.—Dr. Rutherford.

Dose.—2 to 10 grs.

Incompatibles.—Mineral Acids, Alkalies, Salts of Antimony, Lead, Silver, and Persalts of Iron, the Vegetable Alkaloids, Gelatine, and Emulsions.

Prescribed in Water, and may be combined with the Protosalts (but not with the Persalts) of Iron. 4 grs. with 1 minim of Glycerine make a nice pill. Externally as a styptic, dissolved in Glycerine; as a wash, 5 grs. to 1 oz. of Water; in ointments, 40 grs. to 1 oz. 60 grs. to 1 oz. of Chalk make an astringent dentifrice. For an injection, 5 grs. to 1 oz. of Water.

Preparations.

GLYCERINUM ACIDI TANNICI. Brownish-yellow.

Tannic Acid, 1; Glycerine, 4. Rub together, and then complete the solution by a gentle heat, not exceeding that of a water-bath.

(By weight 1 in 6, by measure 1 in 4½).

Dose.—10 to 40 minims.

(Belg. and Fr. 1 and 5 of Glycerine of Starch.)

SUPPOSITORIA ACIDI TANNICI. Light drab. [MODIFIED.]

Tannic Acid, 36 grs.; Oil of Theobroma, 144 grs. Rub the Tannic Acid with 44 grains of the Oil of Theobroma in a slightly-warmed mortar, and add them to the remainder of the Oil of Theobroma, previously melted at a low temperature: mix the whole thoroughly, and pour the mixture while it is fluid into suitable moulds of the capacity of 15 grains.

Each suppository will contain 3 grains of Tannic Acid.

Benzoated Lard and White Wax are now omitted.

SUPPOSITORIA ACIDI TANNICI C. SAPONE. [MODIFIED.]

Tannic Acid, 36 grs.; Glycerine of Starch, 30 grs.; Curd Soap, in powder, 100 grs.; mix, and add Starch Powder sufficient (50 grs.) to form a mass, to be divided into 12 conical suppositories.

Each suppository contains 3 grs. of Tannic Acid.

The quantity of Glycerine of Starch is now reduced, and consequently less Starch powder is required.

Note.—Suppositories containing 10 grs. each are made as follows:—Tannic Acid, 60 grs.; Glycerine of Starch, 30 grs.; Curd Soap, 60 grs.; Starch, 10 grs.; mix and divide into 6. They keep well.

They should not be made with Gelatine.

TROCHISCI ACIDI TANNICI. Light fawn.

Lozenges made with Tannic Acid, Sugar, Gum Acacia, and Tincture of Tolu.

Each lozenge contains half a grain of Tannic Acid.

Dose.—1 to 6 lozenges.

(U.S. 1 grain in each.)

Throat Hospital Pharmacopœia 1½ grain in each. Made with Black Currant Paste.

Not Official.

Suppositorium Acidi Tannici cum Opio.—Tannic Acid, 3 grs.; Powder of Opium, 1 gr.; Stearine, 11 grs.; mix.

Pessary or Vaginal Suppository.—Tannic Acid, 10 grs.; Stearine sufficient to make 2 drms. For one suppository; used in leucorrhœa.

1 drm. of Tannic Acid with 7 minims of Glycerine, in a conical suppository, placed in the vagina, and plugged in with a sponge, effectually stops hæmorrhage.

Schuster's Pastilles.—Tannic Acid, 30 grs.; Opium, 1 gr.; Glycerine, q. s. to form suitable cylinders for the male urethra.

Crayons de Tannin (Fr. Codex).—Tannin, 20; Gum Acacia, 1 (both in powder): mix and make into a mass of pilular consistence by means of equal parts Glycerine and Water, then roll into cylinders of the size required.

Unguentum Acidi Tannici, U.S.—Tannic Acid, 1; Benzoinated Lard, 9; mix.

Unguentum Acidi Tannici c. Opio.—Tannic Acid, 30 grs.; Powdered Opium 30 grs.; Lard, 1 oz.—*British Skin Hospital.*

ACIDUM TARTARICUM.

TARTARIC ACID. DEXTROTARTARIC ACID.

A colourless crystalline Acid, $H_2C_4H_4O_6$, eq. 150, obtained from the Acid Tartrate of Potassium.

Solubility, 10 in 8 of Water; 1 in 5 of Rectified Spirit; 1 in 4½ of Glycerine; 1 in 60 of Ether; 1 in 40 of Absolute Alcohol; nearly insoluble in Benzol and Chloroform.

Tests.—100 grains neutralize 133 grains of Bicarbonate of Potassium. 25 grains dissolved in Water require for neutralization 330 grain-measures of the volumetric Solution of Soda. Its aqueous solution is not affected by Sulphuretted Hydrogen, and gives no precipitate with Solution of Sulphate of Calcium, or Oxalate of Ammonium—indicating absence of metallic contamination, Oxalic Acid, and Lime. If free from Lime it should leave no residue when burnt. It is distinguished from all other Acids by forming with strong solutions of neutral salts of Potassium a crystalline precipitate (a bitartrate).

Medicinal Properties.

The same as Citric Acid, for which it was once substituted in saline mixtures.

Dose.—10 to 30 grains in Water.

(Austr. Belg. Dan. Fr. Ger. Russ. and U.S.)

Incompatibles.—Salts of Potash, of Lime, of Mercury, and of Lead, and the vegetable astringents.

When Citric Acid was very dear, Tartaric Acid was much employed to make saline draughts, and it frequently perplexed the dispenser, for if the Bicarbonate of Potash was added to a solution of Tartaric Acid, Bitartrate was immediately formed, and was precipitated, whereas if the Tartaric Acid was added to the Potash Salt, it might be added to the point of saturation, and remain perfectly soluble.

Contained in the Tartrates of Alkalies, Antimony, and Iron.

ACONITI FOLIA.

ACONITE LEAVES.

HERB.

The fresh leaves and flowering tops of the perennial *Aconitum Napellus*, gathered in July, when about one-third of the flowers are expanded, from plants cultivated in Britain.

Medicinal Properties.

Anodyne. Relieves acute rheumatism, gastrodynia, and carcinoma. It diminishes expectoration in phthisis, and lessens the frequency of the pulse; it has also been found useful in tetanus.

Preparations.

EXTRACTUM ACONITI. Black.

Take 112 pounds of fresh leaves and flowering tops, bruise them, press out the juice, heat it gradually to 130° F. (54·4° C.), and separate the green matter by a calico filter. Heat the strained liquor to 200° F. (93·3° C.) to coagulate the albumen, and again filter. Evaporate the filtrate by a water bath to the consistence of a thin syrup; then add to it the green colouring matter previously separated and passed through a sieve, and stirring the whole together assiduously, evaporate at a temperature not exceeding 140° F. (60° C.) to a pill consistence.

100 lbs. of plant produce 50 lbs. of juice = 7 lbs. extract, subject to variation.

Dose.—1 to 2 grs.

(Austr. Fr. Ger. and Russ. alcoholic from root; Belg. juice from fresh leaves evaporated and mixed with an equal quantity of alcohol, filtered and evaporated; Dan. alcoholic from herb; Fr. also hot aqueous infusion of dried leaves, evaporated; Russ. aqueous from herb; U.S. treat the root with Alcohol and Tartaric Acid, evaporate to an extract, and add 5 per cent. of Glycerine; also Abstractum Aconiti).

Not Official.

Succus.—Aconite Herb Juice, 3; Rectified Spirit, 1; mix, and after seven days filter.

Dose.—15 to 20 minims.

ACONITI RADIX.

ACONITE ROOT.

The root (a blackish brown tap-root) is collected during winter or early spring before the leaves have appeared, and carefully dried. Cultivated in Britain or imported from Germany; the younger roots, of a lighter colour, are not considered so potent.

Medicinal Properties.

Same as that of the plant, but possessed in a stronger degree. Internally, it lowers the pulse; externally, it relieves rheumatic and neuralgic pain.

Preparations.

LINIMENTUM ACONITI. Brown. Kept well for 8 years. [ALTERED.]

Aconite Root, in No. 40 powder, 20; Camphor, 1; Rectified Spirit, to percolate, 30; moisten the root with 20 oz. of the Spirit, and macerate in a closed vessel for three days, agitating occasionally; then transfer to a percolator, and when the liquid ceases to pass continue the percolation with more of the Spirit, allowing the fluid to drop into a receiver containing the Camphor until the product measures 30 oz. =(1 in 1½).

The strength of this preparation is decreased, but not to the extent of 2 to 3, although the percolate is increased from 20 to 30 oz. It was not the intention of the person who introduced this preparation that the whole of the alkaloids should be extracted, but rather that a very strong liniment should be made.

Applied with a camel's-hair pencil alone, or mixed, in equal proportions, with Soap Liniment or Compound Camphor Liniment, and rubbed on the part, (but not upon an abraded surface,) relieves acute neuralgia.

(Not in Austr. Belg. Dan. Fr. Ger. Russ. or U.S.)

TINCTURA ACONITI. Light Brown.

Aconite Root from plants cultivated in Britain, in No. 40 powder, 1; Rectified Spirit, to percolate, 8; macerate for forty-eight hours with three-fourths of the Spirit, agitating occasionally, pack in a percolator and let it drain, then pour on the remaining Spirit; when it ceases to drop press the marc and add Spirit to make 8. =(1 in 8).

The same strength as in 1867, but the root is confined to those cultivated in Britain.

Dose.—5 to 15 minims twice or thrice a day.

5 minims given every three or four hours, increasing the dose to 20 minims, succeeded in curing a case of neuralgia in the face, when every other remedy tried had failed.

Half a minim in Water given every half-hour reduces abnormal temperature, and leads to free perspiration.

It is said by Dr. Fleming to be less likely to irritate the bowels than the extract.

(Austr. 1 Root and 5 Spirit; Belg. 1 dried herb and 5; 1 fresh herb and 1; Fr. 1 dried leaves and 5; 1 dried Root and 5; also Alcoolature 1 fresh leaves and 1; 1 fresh Root and 1; Dan. and Russ. 1 dried herb and 10; Ger. and Russ. 1 Root and 10; U.S. Root, 4; Tartaric Acid, ·04; Alcohol to make 10. All by weight.)

Symptoms of poisoning by Aconite, violent purging, numbness of limbs.

ANTIDOTES.—In case of poisoning by Aconite, the antidotes are emetics, stimulants internal and external.

Atropia is antagonistic to the action of Aconitia on the heart. (*Lancet*, Jan. 8th, 1881, p. 74.)

Not Official.

EXTRACTUM ACONITI RAD. ALCOHOLIC.—Austr. Fr. Ger. Russ. and U.S. Dose ⅓ to ½ gr.

CHLOROFORMUM ACONITI.—Powdered Root, 20; Chloroform to percolate, 20. 1 of this, mixed with 7 of Liniment of Aconite, sprinkled on impermeable piline and applied, or painted on with a camel's-hair brush, relieves neuralgia in almost every form.

TROCHISCI ACONITI.—Each lozenge contains ½ a minim Tincture of Aconite. Dose, one lozenge every half-hour or hour in tonsilitis and febrile affections of the throat.—*Throat Hospital Pharmacopœia.*

ACONITINA.

ACONITINE.

An alkaloid, obtained from Aconite Root.

The Brit. Pharm. gives a process for its preparation, which it is not necessary to repeat here.

A white, usually amorphous powder. Alkaline to test paper.

Solubility, 1 in 150 of cold Water; 1 in 50 of boiling Water; 1 in 6 of Rectified Spirit; 1 in 5 of Chloroform; and 1 in 25 of Ether.

Test.—When burnt with free access of air it leaves no residue.

Medicinal Properties.

Not for internal use. It is a very strong poison, and varies in potency according to the manufacture.

It relieves acute nervous pain when rubbed on the part in the form of ointment, producing a tingling sensation, followed by numbness.

(Austr. Belg. Fr. and Russ.; not in Dan. Ger. or U.S.)

Preparations.

UNGUENTUM ACONITINÆ. Cream-colour, but becomes pinkish when kept.

Aconitine, 8 grs.; Rectified Spirit, ½ drm.; dissolve and add Lard, 1 oz.; mix. =(about 1 in 60).

Not Official.

OLEATUM ACONITINÆ.—Aconitine, 8 grs.; Oleic Acid, 1 oz.: dissolve.

Not Official.

ACTÆA RACEMOSA.

BLACK SNAKE ROOT.

TINCTURA.

Bruised Root, 1; Proof Spirit, 4; macerate fourteen days, and strain.

Medicinal Properties.—Given internally for neuralgia and acute rheumatism.

Dose.—30 to 60 minims.

Externally for reducing inflammation.

The formula above has been in this "Companion" for twenty years. This preparation is now Official in the British Pharmacopœia, under the title Tinctura Cimicifugæ; but as that Tincture is more than twice as weak as the above, the attention of Prescribers is thus called to the great difference, and the old formula is retained for the present.

For Official Tincture, *see* CIMICIFUGA.

ADEPS PRÆPARATUS.

PREPARED LARD.

Syn. AXUNGIA, *Edin.*

The purified fat of the Hog, Sus scrofa.

Take of the internal fat of the abdomen of the hog, perfectly fresh, 14 pounds. Remove as much of the external membranes as possible, and suspend the fat so that it shall be freely exposed to the air for some hours; then cut it into small pieces, and beat these in a stone mortar until they are thus, or by some equivalent process, reduced to a uniform mass, in which the membranous vesicles are completely broken. Put the mass thus produced into a vessel surrounded by warm water, and apply a temperature, not exceeding 130° F. (54·4° C.), until the fat has melted and separated from the membranous matter. Finally strain the melted fat through fine flannel.

This process is an improvement on that of 1867 Pharmacopœia.

Soluble 1 in 22 Ether and 1 in 16 of Oil of Turpentine; melts at 100° F.

Lard is not adulterated as a rule, but it was frequently prepared in the country with little care, and consequently bad in colour and odour; now, however, it is made upon a very large scale by London manufacturers, of superior quality.

It is apt to grow rancid by keeping, and mouldy if it contains water.

It is the basis of several ointments.

Tests.—Has no rancid odour; dissolves entirely in Ether. Distilled Water in which it has been boiled when cooled and filtered gives no precipitate with Nitrate of Silver, and is not rendered blue by the addition of solution of Iodine—indicating absence of Salt and Starch.

(Austr. Belg. Dan. Fr. Ger. Russ. and U.S.)

Medicinal Properties.

Emollient. Added to poultices to prevent them drying and sticking to the skin. Used also in scabies, and to destroy pediculi.

Used in the preparation of Emplastrum Cantharides, and the following ointments:—Mercury, Nitrate of Mercury, Iodine, and Turpentine.

Several substitutes for lard have been proposed, and among them certain products obtained from petroleum.

See PARAFFINUM DURUM, PARAFFINUM MOLLE.

Preparation.

ADEPS BENZOATUS. [ALTERED.]

Prepared Lard, 16 oz.; Benzoin, in powder, 140 grs.; heat together in a water bath for two hours, stirring occasionally, and strain; lastly, stir till cold. Keeps well. The quantity of Benzoin is now reduced.

(Out of 140 grs. of Siam Benzoin in tears, 46 grs. remain undissolved.)

(Brit. Russ. and U.S. 2 Benzoin and 100 Lard; Belg. 4 and 100; Fr. 5 Tincture in 1000. Not in Austr. Dan. or Ger.)

Solution of Subacetate of Lead is occasionally prescribed with this, and when the two are incorporated the odour of Benzoin is destroyed.

Used for making the following ointments:—Aconitine, Atropine, Belladonna, Calamine, Chrysarobin, Galls, Calomel, Iodoform, Acetate of Lead, Iodide of Potassium, Savin, Simple, Stavesacre, Sulphur, and Zinc.

ÆTHER.

ETHER.

Syn. ÆTHER SULPHURICUS, *Edin. Dub.*

A volatile and inflammable liquid, prepared from Alcohol.

Colourless; contains not less than 92 per cent. by volume of pure Ether $(C_2H_5)_2O$, eq. 74.

Solubility, 1 in 10 of Water; unites in all proportions with Rectified Spirit.

Water dissolves a tenth of its volume of Ether, and reciprocally Ether takes up about the same proportion of Water. It is colourless, of a strong and characteristic odour, hot and pungent in taste. It evaporates speedily in the open air, with the production of considerable cold. When good, it evaporates from the hand without leaving a disagreeable odour. It boils below 105° F. (40·5° C.), and its vapour is very dense and very inflammable. It dissolves Corrosive Sublimate, Iodine and Bromine freely; Sulphur and Phosphorus sparingly. It is also a solvent of the volatile and fixed oils, many resins and balsams, caoutchouc, and most of the organic vegetable alkaloids. It does not dissolve Potash and Soda, in which respect it differs from Alcohol.

Tests.—Sp. g. ·735. 50 measures agitated with an equal volume of Distilled Water are reduced to 45 by an absorption of 10 per cent.

Note.—Methylated Ether leaves an odour after it has evaporated.

(Austr. sp. g. ·730; Belg. and Fr. sp. g. ·720; Dan. sp. g. ·725; Ger. and Russ. sp. g. ·725—·728; U.S. sp. g. ·750.)

Medicinal Properties.

Best prescribed as Spirit of Ether, which readily mixes with water.

It is a powerful, diffusible stimulant, expectorant, antispasmodic, and narcotic, and is of great use in dyspnœa and gastralgia. Used to expel flatus from the stomach, and to allay pain and cramp in that organ. In nausea it is given as a cordial. It was used 35 years ago as an anæsthetic,[*] and is still preferred by some to Chloroform.

Dose.—20 to 40 minims.

Contained in Collodium, Collodium Flexile, and Tinctura Chloroformi et Morphinæ. Employed in the preparation of Æther Purus.

Preparations.

SPIRITUS ÆTHERIS. Called HOFFMAN'S ANODYNE in the Continental Pharmacopœias.

Ether, 1; Rectified Spirit, 2. =(1 in 3).

Sp. g. ·809.

Dose.—30 to 60 minims.

(Austr. 1 in 4, sp. g. ·820; Dan. and Ger. 1 in 4, sp. g. ·807—·811; Belg. Æther Sulphuricus Alcoholicus, sp. g. ·791—·795; Fr. equal weights, sp. g. ·783; Russ. 1 in 3, sp. g. ·800; U.S. 3 in 10. All by weight.)

Contained in Tinctura Lobeliæ Ætherea.

SPIRITUS ÆTHERIS COMPOSITUS. *Syn.*—HOFFMAN'S ANODYNE. [NEW.]

Gradually mix 36 fl. oz. Sulphuric Acid with 40 fl. oz. Rectified Spirit, and let the mixture stand twenty-four hours; then distil until the fluid in the retort begins to blacken. Shake the distillate with Lime Water to neutralize any acid, and remove the supernatant liquor, and expose it to the air for about twelve hours. Pour 3 fl. drs. of the resulting liquid into a mixture of 8 fl. oz. Ether and 16 fl. oz. Rectified Spirit.

Dose.—30 to 120 minims.

(U.S. Stronger Ether, 30; Alcohol, 67; Ethereal Oil, 3: mix. Not in Austr. Belg. Dan. Fr. Ger. or Russ.)

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[*] The Author devised the first apparatus for the inhalation of Ether, in 1846, which he has presented to the Museum of University College. Mr. Liston performed the first capital operation in this country with this apparatus; the patient not suffering the least pain, nor, indeed, after the return of consciousness, could he be persuaded that his leg was off until he had placed his hand upon the stump.

Not Official.

SPIRITUS ÆTHERIS MURIATICUS.—Sp. g. ·860.

Syn.—SP. SALIS DULCIS; CLUTTON'S FEBRIFUGE SPIRIT.

A very old preparation, and is still prescribed for feverish symptoms

Dose.—30 to 60 minims.

(Dan. Æther Chloratus Spirituosus, sp. g. ·838—·842.)

ÆTHER PURUS.

PURE ETHER.

Ether, $(C_2H_5)_2O$, free from Alcohol and Water.

Shake 40 of Ether with 20 of Water in a bottle, and after a few minutes decant the Ether, mix it with 20 of fresh Water, shake, and again decant; put the decanted Ether into a retort, with 1 of recently burnt Lime, and 4 of dried Chloride of Calcium; attach closely a receiver, and let them stand twenty-four hours, then distil with a gentle heat.

Boils at 95° F. (35° C.); density of Vapour, 2·565.

Tests.—Sp. g. not exceeding ·720. When shaken with a fourth of its bulk of Solution of Iodide of Potassium and a little Starch paste, no blue colour is produced.

If kept in white glass bottles and exposed to the light it produces ozone. It should therefore be kept in the dark.

(Austr. and U.S. ·725; see also under Æther.)

Medicinal Properties.

Inhaled for surgical operations, 2 oz. will generally suffice for an operation lasting ten minutes if inhaled from a well-constructed inhaler in a room at the temperature of 70° to 75° F. (21·1° to 23·9° C.), but not higher; it is also inhaled with great benefit in painful asthma.

ÆTHER ACETICUS.

ACETIC ETHER.

$C_2H_5C_2H_3O_2$, eq. 88.

A colourless liquid, with an agreeable ethereal odour.

Tests.—Sp. g. about 0·900. Boiling point 166° F. (74·4° C.)

NOTE.—It would be an improvement if, instead of boiling point 166° F., it stated "not less than 90 p. c. should distil between 155° and 160° F., the bulb of the thermometer being placed as usual in the neck of the fractionating flask."

Solubility about 1 in 9 of Water. Soluble in all proportions in Rectified Spirit and in Ether.

When 10 c. c. are agitated with an equal volume of Water in a graduated test-tube, the upper, ethereal layer, after its separation should measure not less than 7 c. c. (*Ephemeris*, March, 1884).

Medicinal Properties.

Antispasmodic and Carminative.

Dose.—20 to 60 mins.

(Austr. and Russ. sp. g. ·900; Belg. sp. g. ·890; Dan. and Ger. sp. g. ·900—·904; Fr. sp. g. ·915; U.S. sp. g. ·889—·897.)

Used in the preparation of Liquor Epispasticus.

ÆTHERIS NITROSI SPIRITUS.

See SPIRITUS ÆTHERIS NITROSI.

ALBUMEN OVI.

See OVI ALBUMEN.

ALCOHOL AMYLICUM.

AMYLIC ALCOHOL.

Syn. Fousel Oil; Hydrate of Amyl.

Amylic Alcohol, $C_5H_{11}HO$, with a small proportion of other spirituous substances.

A colourless liquid with a characteristic odour, obtained as a by-product in the distillation of crude Spirit.

It should be redistilled, and the product passing over at 253° to 260° F. (122·8°—126·7° C.) be alone collected for use.

Soluble, 1 in 60 of Water; in all proportions in Alcohol, Ether, and Essential Oils.

Test.—Sp. g. ·818.

Used in the preparation of Amyl Nitris and Sodii Valerianas—*Brit. Pharm.*; also as a solvent in proximate organic analysis.

(Belg. sp. g. ·818; boils at 132° C.)

ALCOHOL ETHYLICUM.

ETHYLIC ALCOHOL.

Syn. Absolute Alcohol.

C_2H_5HO.

[NEW.]

A colourless liquid, prepared by dehydrating Rectified Spirit and distilling it, and containing one, or at most two per cent. of Water.

Tests.—Sp g. ·797—·800. Entirely volatilized by heat; not rendered turbid when mixed with Water; does not cause anhydrous Sulphate of Copper to assume a decided blue colour, even after the two have been well shaken together.

(Belg. and U.S. sp. g. ·794.)

Used in the preparation of Chloroform and Liquor Sodii Ethylatis.

Not Official.

ALCOHOL METHYLICUM.

Syn. Rectified Pyroxylic Spirit, Wood Spirit, Wood Naphtha.

A product of the destructive distillation of wood, which has been submitted to various processes of rectification.

A colourless liquid with a peculiar odour.

Sp. g. about ·803.

It is without action on Litums; is not rendered turbid by admixture with water; free from smoky taste.

It mixes readily with Water, Ethylic Alcohol, Chloroform, and Ether.

It dissolves Fats and Volatile Oils.

Medicinal Properties.

Narcotic, sedative, and anti-emetic. It palliates the cough and lessens the febrile excitement of phthisis. It has been recently mixed with chloroform for use as an anæsthetic (Regnauld's Anæsthetic Mixture). *See* Chloroform.

ALOE BARBADENSIS.

BARBADOES ALOES.

The juice, when inspissated, which flows from the transversely-cut bases of the leaves of *Aloe vulgaris;* imported from Barbadoes and the Dutch West Indian Islands, and known in commerce as Barbadoes and Curaçoa Aloes.

Solubility in Water, 75 per cent. Almost entirely soluble in proof Spirit.

A test for the presence of Aloes (Barbadoes, Socotrine, and others) in Pharmaceutical Preparations. *See Pharm. Journ.*, Feb., 1885.

It is found by experiment that the aqueous extract is far more active than is the resinous portion of Aloes; the Barbadoes Aloes containing a larger amount of this than the Socotrine, is perhaps the reason why the Barbadoes is the more purgative; thus, 2 grs. are equal to 3 grs. of Socotrine.

Medicinal Properties.

Purgative, acting chiefly on the large intestine. Employed as an enema in dislodging ascarides from the rectum, also as a stimulating cathartic in the constipation of amenorrhœa.

Dose.—2 to 4 grs.

(Belg. and Fr.; not in the others.)

Used in the preparation of Aloin, Pil. Cambogiæ Comp., Pil. Colocynthidis Comp., and Pil. Colocynthidis et Hyoscyami.

Preparations.

ENEMA ALOES.

Aloes, 40 grs.; Carbonate of Potash, 15 grs.; Mucilage of Starch, 10 oz.; mix for one enema.

10 grs. are found enough generally.

NOTE.—Enema Aloes can be made with either Aloe Barbadensis or Aloe Socotrina.

EXTRACTUM ALOES BARBADENSIS. Black.

Barbadoes Aloes, 16 oz. in small pieces, thoroughly mixed with 1 gallon (=160 oz.) of boiling Distilled Water, allowed to stand for twelve hours, and the clear liquor evaporated to dryness.

Dose.—1 to 3 grs. British Ph. 2 to 6 grs.

(100 parts of Aloes yield 75 parts of extract.)

PILULA ALOES BARBADENSIS. Black.

Barbadoes Aloes, in powder, 2; Hard Soap, in powder, 1; Oil of Caraway, $\frac{1}{8}$; Confection of Roses, 1. Mix. =(1 in 2).

Dose.—5 to 10 grs.

PILULA ALOES ET FERRI. Intense greenish-brown.

Barbadoes Aloes, in powder, 2; Sulphate of Iron, $1\frac{1}{2}$; Compound Powder of Cinnamon, 3; Confection of Roses, 4. Mix. (6 of Confection are required.) =(about 1 in 6).

Dose.—5 to 10 grs.

(U.S. Purified Socotrine Aloes, 1; Dried Sulphate of Iron, 1; Aromatic Powder, 1; Confection of Roses, q. s. Ger. Cape Aloes, 1; Dried Sulphate of Iron, 1; Alcohol, q. s.; not in the others.)

Not Official.

Pilula Aloes Diluta.—Marshall Hall's Pill. Take of Barbadoes Aloes 4 oz., dissolve in water and strain, then add 4 oz. Extract of Liquorice, 4 oz. Treacle, 4 oz. Hard Soap thinly sliced; mix and evaporate to a pill consistence.

Dose.—3 or 4 grains.

ALOE SOCOTRINA.

SOCOTRINE ALOES.

The juice, when inspissated, which flows from the transversely-cut bases of the leaves of *Aloe Perryi*, and probably other species.

Imported principally by way of Bombay and Zanzibar, and known in commerce as Socotrine and Zanzibar Aloes.

Solubility in Water, 50 per cent.; the residue is pretty well inert; almost entirely soluble in proof Spirit.

Medicinal Properties.

Purgative, but slow in action. Given in mesenteric disease and distended bowels. Although the purgative property acts chiefly on the lower portion of the intestinal canal, it produces on the upper part tonic and stomachic effects, when small doses only are given. One grain, with ⅛ gr. Extract of Nux Vomica, is an excellent pill for this purpose and to relieve chronic dyspepsia. Aloes, combined with Rhubarb, Soap and Scammony, where there is a defective secretion of bile; with Iron and Myrrh for amenorrhœa.

Aloes were formerly supposed to aggravate Hæmorrhoids, but the Aqueous Extract commonly given in pills, and the Compound Decoction are free from objection.

In very large doses is a powerful hepatic stimulant. It renders the bile more watery, but at the same time increases the secretion of the biliary matter by the liver.—Dr. Rutherford.

Dose.—2 to 6 grs.

(Austr. Belg. Russ. and U.S.; Cape Aloes is Official in Belg. Fr. Dan. Ger. and Russ.)

Used in the preparation of Aloin, Extractum Colocynthidis Co., Pilula Rhei Co., and Tinctura Benzoini Co.

Preparations.

DECOCTUM ALOES COMPOSITUM. Deep blood-red. [ALTERED.]

Extract of Socotrine Aloes, 1; Myrrh, ½; Saffron, ½; Carbonate of Potassium, ½; Extract of Liquorice, 4; Compound Tincture of Cardamoms, 30; Distilled Water, a sufficiency. Reduce the Extract of Aloes and Myrrh to coarse powder, and put them, together with the Carbonate of Potassium and Extract of Liquorice, into a suitable covered vessel with 40 of Distilled Water, boil gently for five minutes, then add the Saffron: let the vessel with the contents cool, then add the Tincture of Cardamoms, and covering the vessel closely, allow the ingredients to macerate two hours; finally strain through flannel, pouring as much Distilled Water over the contents of the strainer as will make the strained product measure 100.

4·375 grs. Extract of Aloes in 1 fl. oz. = (1 in 100).

Dose.—½ to 2 oz. as a mild cathartic, tonic, and antacid. Known to the public as the Baume de Vie.

Decoctum Aloes Compositum "Squire." The same as the above formula, except that Fluid Extract of Liquorice, 10, is used in the place of Extract of Liquorice, 4.

The fluid extract is much better than the solid extract for covering the taste of Aloes; there is a marked difference in the taste of the two preparations, even when they practically contain the same amount of Liquorice. It is a most valuable aperient; 1 oz. or 1½ oz., equal to 6 grs. Aloes, act naturally without griping, whereas 3 grs. of Aloes in a pill will probably purge and gripe too. A paper on Aloes (*Medical Times and Gazette*, Jan. 4, 1868) records the fact, that a very much larger dose of Aloes can be given in solution than in the solid form.

ENEMA ALOES *in the British Pharmacopœia occurs under both kinds of Aloes, indicating that either may be used.*

ENEMA ALOES.

Aloes, 40 grs.; Carbonate of Potash, 15 grs.; Mucilage of Starch, 10 oz.; mix for one enema.

As an anthelmintic 3 to 4 ounces only should be used.

EXTRACTUM ALOES SOCOTRINÆ. Black.

Socotrine Aloes, 16 oz.; thoroughly mixed with one gallon (=160 oz.) of boiling Distilled Water, allowed to stand for twelve hours, and the clear liquor evaporated to dryness.

Dose.—1 to 3 grs. Brit. Ph. 2 to 6 grs.

(100 parts of Aloes yield 50 parts extract.)

The extract being more active than the Aloes, a smaller pill can be given, and it has the advantage of acting more pleasantly.

(Austr. Belg. Dan. Ger. and Russ.; not in Fr. or U.S.)

U.S. has Aloe Purificata, but that is an Alcoholic Extract.

PILULA ALOES SOCOTRINÆ. Very dark brown.*

Socotrine Aloes in powder, 2; Powdered Hard Soap, 1; Volatile Oil of Nutmeg, ⅛; Confection of Roses, 1. Mix. =(1 in 2).

Dose.—5 to 10 grs.

(Belg. Fr. and U.S., Aloes and Soap only, 1 in 2; not in the others.)

PILULA ALOES ET ASAFŒTIDÆ. Brown.*

Socotrine Aloes in powder, 1; Asafœtida, 1; Powdered Hard Soap, 1; Confection of Roses, about 1, or a sufficiency. (¼ Confection is sufficient). Mix. =(1 in 4).

Cathartic and antispasmodic.

Dose.—5 to 10 grs.

(U.S. 1 in 3, omitting Conf. Rosæ; not in the others.)

PILULA ALOES ET MYRRHÆ. Reddish brown. [MODIFIED.]

Socotrine Aloes, 2; Myrrh, 1; Dried Saffron, ½; Treacle, 1; Glycerine a sufficiency. Mix. =(about 1 in 3).

Treacle and Glycerine have been substituted for Confection of Roses.

Stimulant and cathartic.

The formula for Pil. Rufi in 1557 was Aloes, 2; Myrrh, 1; Saffron, 1; White Wine, a sufficiency.

Dose.—5 to 10 grs.

(U.S. with Aromatic Powder; not in the others.)

TINCTURA ALOES. Black.*

Socotrine Aloes in coarse powder, 1; Extract of Liquorice, 3; Proof

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* Kept well in closed vessels 8 years.

Spirit, a sufficiency; macerate seven days in 30 of the Spirit, agitating occasionally; filter and add sufficient proof Spirit to make 40.
=(1 in 40).

Dose.—1 to 2 drms.

(Belg. 1 in 5; Fr. Ger. and Russ. 1 and 5; U.S. 1 in 10; all are by weight.)

VINUM ALOES. Red.

Socotrine Aloes, 1½ oz.; Ginger in coarse powder, 80 grs.; Cardamom Seeds, bruised, 80 grs.; Sherry, 40 oz.; digest seven days, filter, and make up with Sherry to 40 oz.

About 2 grs. in each fluid drachm=(1 grain in 26⅔ minims).

Dose.—1 to 2 drms.

(U.S. Purified Aloes, 6; Cardamoms, 1; Ginger, 1; stronger White Wine to make 100 by weight; not in the others.)

Not Official.

Tinctura Aloes Composita (Elixir ad longam vitam).

Belg.—Aloes, 20; Agaric, 3; Gentian, 3; Rhubarb, 3; Zedoary, 3; Saffron, 2; Electuarium Theriacale, 3; Alcohol (50 p. c.), 1000.

Fr.—Aloes, 20; Agaric, 2·5; Gentian, 2·5; Rhubarb, 2·5; Zedoary, 2·5; Saffron, 2·5; Electuarium Theriacale, 2·5; Alcohol (60 p. c.), 1000.

Ger.—Aloes, 30; Gentian, 5; Rhubarb, 5; Zedoary, 5; Saffron, 5; Alcohol (68 p. c.), 1000.

Russ.—Aloes, 45; Agaric, 5; Gentian, 5; Rhubarb, 5; Zedoary, 5; Saffron 5; Alcohol (70 p. c.) 1000. All are by weight.

ALOIN.

ALOIN.

$C_{16}H_{18}O_7$.

[NEW.]

A yellow, inodorous crystalline substance extracted from Aloes by solvents and recrystallization. As obtained from the different varieties of Aloes the products differ slightly, but their medicinal properties are similar.—*Brit. Pharm.*

Now included in B.P.; was a "Not Official" in Companion in 1864.

P.B. Dose.—½ to 2 grains.

"Aloin has very properly been passed without recognition by the U.S.P.;" "the different kinds of Aloin vary as much from each other as do the alkaloids of Cinchona Barks."—*Ephemeris*, Sept., 1884.

Barbaloin, Zanaloin, and Nataloin, in doses of 2 grains, are each of them more or less aperient. They are each of them decidedly uncertain and variable in their action. 2 grains of Barbaloin cause a decided effect. 4 grains of Socaloin and Nataloin have been frequently given without producing more than a slight effect. (*Pharm. Jour.*, Aug. and Sept., 1876.)

Soluble, 1 in 400 of Water; 1 in 70 of Rectified Spirit; freely soluble in hot fluids; nearly insoluble in Ether.

Not Official.

ALUMINIUM.

ALUMINIUM.

Al, eq. 27.

A silver-white metal, sonorous, and lighter than glass, having sp. g. 2·560.

Indicated by Sir Humphrey Davy in 1808; made by Wöhler by decomposing its chloride with Sodium in 1828, and first produced in ingots by M. Deville in 1854. It resists the action of cold concentrated Nitric and Sulphuric Acids, but is readily attacked by Hydrochloric Acid. Its oxide, being identical with Sapphire, forms an impermeable crust on the surface of the metal, and protects it from further action of the air. Its use is limited at present to jewellery, but, from its extreme lightness and tenacity, it promises to be much more extensively employed if some means of soldering it together could be discovered.

Neither Aluminium nor Alumina is in the British Pharmacopœia. Alumina, however, is much used to fine turbid medicinal waters and other solutions, and is easily obtained by adding in excess a solution of Carbonate of Potassium or Sodium to a solution of Alum, and well washing the precipitate.

Roche Alum is scarcely ever used.

CIMOLITE is composed of Alumina, 23; Silica, 63; Oxide of Iron, 1·25; Water, 12.

FULLER'S EARTH, of Alumina, 10; Silica, 53; Lime, 0·5; Magnesia, 1·25; Oxide of Iron, 9·5; Water, 24.

KAOLIN, of Alumina and Silica.

ALUMEN.

ALUM.

Sulphate of Aluminium and Potassium, $\mathbf{Al_2 3SO_4,\ K_2SO_4,\ 24H_2O}$, eq. 948.

Sulphate of Aluminium and Ammonium, $\mathbf{Al_2 3SO_4,\ (NH_4)_2SO_4,\ 24H_2O}$, eq. 906.

Both Potassium and Ammonium Alums are *now* included in B.P.

Potash Alum or Ammonia Alum crystallized from solution in Water.

In colourless transparent crystalline masses, exhibiting the faces of the regular octahedron.

Alum when heated melts in its own water of crystallization.

Solubility, 1 in 11 of Water; 3 in 1 of boiling Water; Potash Alum, 1 in 3 of Glycerine; Ammonia Alum, 1 in 1¼ of Glycerine. Insoluble in Rectified and Proof Spirit.

Tests.—Its aqueous solution gives a white precipitate (Hydrate of Aluminium) with solution of Potash or Soda, soluble in excess, gives a white precipitate with Chloride of Barium (Sulphate of Barium); affords little or no colour with Ferrocyanide or Ferricyanide of Potassium—indicating absence, or only a trace of Iron.

Potash Alum is distinguished from Ammonia Alum by the latter giving off Ammonia when its aqueous solution is heated with Potash or Soda.

Medicinal Properties.

Astringent, used as a gargle for relaxed throat, 10 grs. in 1 oz. of Water; as an injection in leucorrhœa, 60 grs. in a pint of Water; as an application to the eyes in children and adults when there is mucus or purulent matter, 2 to 6 grs. in 1 oz. of Water; 10 to 15 grs. three times a day has been given for internal hemorrhages, for menorrhagia, and in cases of lead poisoning. A saturated solution in Water forms an excellent styptic for hemorrhage, leech bites, &c. Dr. Ringer recommends it in uncomplicated cases of whooping cough after the acute stage is over. It has also been recommended as an emetic in croup.

Dose.—10 to 20 grs.; for children 2 grs. A teaspoonful in Honey or Treacle acts as an emetic.

(Austr. Belg. Dan. Fr. Ger. Russ. and U.S. use Potash Alum only.)

Sulphate of Aluminium forms double salts, called Alums, with the Sulphates of Potassium, Sodium, or Ammonium. Commercial Alum is made with salts of Potassium or Ammonium, according to their respective value at the time.

Preparations.

GLYCERINUM ALUMINIS. [NEW.]

Alum, in powder, 1; Glycerine, 5. Stir together in a porcelain dish, gently applying heat until solution is effected; set aside, and pour off the clear fluid from any deposited matter.

A powerful local astringent. When diluted with Water it forms a useful gargle.

ALUMEN EXSICCATUM. *Syn.* ALUMEN USTUM. Dried Alum. Opaque white.

Heat Potassium Alum in a porcelain capsule till it liquefies; raise and continue the heat, not allowing it to exceed 400° F. (204·4° C.), till aqueous vapour ceases to be disengaged, and then reduce the residue to powder.

100 parts of Alum yield about 54 parts of dried Alum.

It is slowly but completely soluble in Water.

As it readily absorbs Water from the atmosphere, it should be kept in a well-stoppered bottle.

For external use only. Escharotic, used to remove fungous flesh.

(Austr. Belg. Dan. Fr. Ger. Russ. and U.S.)

Not Official.

ALUM CATAPLASM, or POULTICE.—Alum, 60 grs.; the whites of two eggs. For chilblains.

ALUM GARGLE.—Broken rose petals, 3 drms.; Diluted Sulphuric Acid, 3 drms.; cold Distilled Water, 10 oz.; digest for two hours, and strain 8 oz.; then add Alum, 2 drms.; Sugar, 4 drms.; Rectified Spirit, 4 drms.; dissolve. This kept well 7 years.

When used, to be mixed with an equal bulk of Water.

Several formulæ for Alum gargle will be found in Squire's Pharmacopœias of the London Hospitals.

ALUM WHEY.—Alum, 120 grs. boiled in a pint of Milk. *Dose.*—A wineglassful.

Alum, a few grains, rubbed with white of egg, forms a coagulum; a good application to black bruises.

FERRI ET AMMONII SULPHAS.—Ammonio-Ferric Alum, U.S.P.

IRON ALUM is an Alum in which Iron takes the place of Aluminium. It is especially useful in bleeding from the kidneys; it arrests the hemorrhage and the anæmia that accompanies it; it is considered more astringent than Alum.

The aqueous solution will, even after filtration, let fall Peroxide of Iron.

Dose.—5 to 10 grs.

CHLORIDE OF ALUMINIUM, called Chlor-Alum, is employed as a disinfectant.

AMMONIACUM.

AMMONIACUM.

A gum-resinous exudation from the stem (after being punctured by beetles) of *Dorema Ammoniacum*, in tears or masses, of a pale yellow colour changing to a cinnamon brown on long exposure to the air, brittle when cold, but readily softens with heat, and when broken has an opaque white and shining surface. Collected in Persia.

Solubility, sparingly in Water, but forms with it a nearly white emulsion; when 50 grs. are digested in 2 oz. of Rectified Spirit, 40 grs. are dissolved, but with Proof Spirit 30 grs. are dissolved.

(Austr. Belg. Dan. Ger. Russ. and U.S.; Fr. purified by Alcohol (60 p. c.)

Medicinal Properties.

Antispasmodic, stimulant, expectorant, in chronic catarrh, bronchitic affections, and asthma, either in mixture or in pill.

Dose.—10 to 20 grs.

Contained in Emplastrum Galbani, and in Pilula Scillæ Composita, Pil. Ipecacuanhæ et Scillæ.

Preparations.

EMPLASTRUM AMMONIACI CUM HYDRARGYRO. *See* HYDRARGYRUM.

As the value of this preparation depends chiefly upon the Mercury it contains, the formula is given under Hydrargyrum.

MISTURA AMMONIACI. A milk-like emulsion.

Ammoniacum, ¼ oz., rubbed down with Water 8 oz., gradually added; strain through muslin. = (1 in 32).

Dose.—½ to 1 oz. as an expectorant: may be combined with 15 minims of Tincture of Squill, or 15 minims of Fœtid Spirit of Ammonia.

(U.S. about 1 in 25; not in the others.)

Not Official.

Mistura Ammoniaci Comp.—Comp. Tinct. Camphor, 30 mins.; Oxymel of Squill, 30 mins.; Ammoniacum Mixture, to 1 oz.—*Consumption Hospital.*

Mist. Ammoniaci Ipec. et Lobeliæ.—Ipecac. Wine, 10 mins.; Ethereal Tinct. Lobelia, 10 mins.; Ammoniacum Mixture, ½ oz.; Water, to 1 oz.—*Royal Chest Hospital.*

Not Official.

AMMONIUM.

AMMONIUM.

NH_4, eq. 18.

According to Roscoe, Ammonium has been isolated, but it does not seem to be able to exist in an uncombined state, unless under high pressure and at a low temperature; it is a dark blue liquid possessing a metallic lustre, and very readily decomposes into Ammonia and Hydrogen.

AMMONIA.

AMMONIA.

This important compound is chiefly produced artificially, but it exists in some volcanic products, and is discoverable in sea-water. It is found also in putrid urine and in the salts produced by the decomposition of animal matter.

Its history in the form of Sal Ammoniac is very ancient. This salt was manufactured in very early times from soot afforded by the combustion of camels' dung, from which it was obtained by sublimation. The process was chiefly conducted in the neighbourhood of the temple of Jupiter Ammon in Egypt, and to this circumstance it owes its name;

it was afterwards obtained either from putrid urine or by the destructive distillation of animal substances.

The chief source at present is the liquor from the gas-works, but the Ammonia produced in this way is apt to contain impurities, particularly the organic bases known as "the compound Ammonias."

The purest form of Ammonia is that obtained as a by-product in the manufacture of Borax. The Boracic Acid of Tuscany, when saturated with Soda, evolves very considerable quantities of pure Ammonia, and the Liquor Ammoniæ and Carbonate of Ammonia, produced in this way, are sold under the name of Volcanic Ammonia, and are to be preferred to all others.

The whole of the Preparations of Ammonia are here grouped.

AMMONIÆ LIQUOR FORTIOR.

STRONG SOLUTION OF AMMONIA.

Contains 32·5 per cent. of Ammoniacal Gas, **NH_3**, eq. 17, dissolved in Water.

A colourless liquid, with a characteristic and very pungent odour, and a strong alkaline reaction.

Tests.—Sp. g. ·891. 52·3 grains by weight requires for neutralization 1000 grain-measures of the volumetric solution of Oxalic Acid. When diluted with four times its volume of Distilled Water, it does not give precipitates with solution of Lime, Oxalate or Sulphide of Ammonium, or Ammonio-Sulphate of Copper, and when treated with an excess of Nitric Acid is not rendered turbid by Nitrate of Silver or by Chloride of Barium—indicating freedom from carbonates, lime, metals, sulphides, chlorides, and sulphates.

1 fluid drachm contains 15·83 grains of Ammonia NH_3.

(Belg. Ammonia Liquida, sp. g. ·935, 17 per cent.; Fr. Ammoniaque Liquide, sp. g. ·925; U.S. sp. g. ·900, 28 per cent.; *see* also Liquor Ammoniæ.)

Used in the preparation of Linimentum Camphoræ Compositum, Liquor Ammonii Citratis Fortior, Spiritus Ammoniæ Aromaticus, Spiritus Ammoniæ Fœtidus, Tinctura Opii Ammoniata.

Best given in the more diluted state, as in Liq. Ammoniæ.

Preparations.

LIQUOR AMMONIÆ. Solution of Ammonia.

Strong Solution of Ammonia, 1; Distilled Water, 2; mix. Colourless. Contains 10 per cent. by weight of Ammonia, NH_3.

1 fluid drachm contains 5·2 grains of Ammonia NH_3.

Tests.—Sp. g. ·959. 85 grains by weight requires for neutralization 500 grain-measures of the volumetric solution of Oxalic Acid.

(Austr. Dan. Ger. and Russ. (10 per cent.) sp. g. ·960; U.S. sp. g. ·959; Belg. Fr. and U.S. *see* Ammon. Liq. Fort.)

Used in the preparation of Tinctura Quininæ Ammoniata.

Medicinal Properties.

Stimulant, antacid, and antispasmodic; relieves nervous headache, and is useful in pneumonia, bronchitis, and dyspepsia. Counteracts the after-effects of alcohol, and delirium tremens. Stimulant in low states of the system, as typhoid forms of fever. Externally (applied to the nostrils) in syncope; an excellent application to the sting of a wasp or the bite of an adder. On the skin it is a powerful rubefacient, and as an embrocation a counter-irritant in pains and stiffness of joints, &c.

Dr. Halford injected 30 minims of Liquid Ammonia into the veins for snake bites; the operation requires great care, using a six-minim syringe. It should only be used in almost hopeless cases.

Dose.—10 to 20 minims in some bland fluid. Dr. Tyler Smith injected into the vein of the right arm 8 minims with 24 minims of Water, when the patient was sinking from puerperal fever, and she recovered. Half an ounce swallowed by mistake caused death by suffocation.

LINIMENTUM AMMONIÆ. A semi-solid cream.

Solution of Ammonia, 1; Olive Oil, 3; mix. = (1 in 4).

A counter-irritant.

(Dan. and Russ. 1 and 3; Austr. and Ger. 1 and 4; Belg. 1 and 9; all with Olive Oil; Fr. 1 and 9 Almond Oil; U.S. 3 and 7 Cotton Seed Oil. All are by weight.)

SPIRITUS AMMONIÆ FŒTIDUS. Fœtid Spirit of Ammonia.

Colourless when first made; becomes yellow by keeping.

Strong Solution of Ammonia, 2; Asafœtida in small pieces, 1½; Rectified Spirit, a sufficiency; macerate the Asafœtida in 15 of Spirit twenty-four hours, distil, add the Ammonia to the distillate, and make up with Spirit to 20.

Test.—Sp. g. ·847.

Medicinal Properties.

Stimulant, antispasmodic, combined with Ammoniacum Mixture excellent for catarrh and asthma of old people.

Dose.—½ to 1 drachm.

(Not in the other Pharmacopœias.)

INCOMPATIBLES.—Acids, and Acidulous Salts.

Not Official.

TINCT. AMMON. COMP.—EAU DE LUCE.—Mastic, 2 drs.; Rectified Spirit, 9 drs.; Ol. Lavand. 14 min.; Strong Liquor Ammoniæ, 20 oz.: dissolve. Stimulant, antispasmodic.

Dose.—5 to 10 minims in Water.

LOTIO CRINALIS.—Ol. Amygdal., 1 oz.; Liq. Ammon. Fort., 1 oz.; Sp. Rosmar., 4 oz.; Aq. Mellis, 2 oz.; mix.

AMMONII ACETATIS LIQUOR FORTIOR.

STRONG SOLUTION OF ACETATE OF AMMONIUM.

$NH_4.C_2H_3O_2$, eq. 77, dissolved in Water.

[NEW.]

Carbonate of Ammonium, 15½, or a sufficiency; Acetic Acid, 50; Distilled Water, a sufficiency.

Reduce the Carbonate to powder and add it gradually to the acid to form a neutral solution, then add sufficient Distilled Water to yield 60.

To ascertain when the solution is neutral a small sample should be taken out in a test-tube, gently warmed, and well shaken to free it from Carbonic Acid before trying it with litmus or turmeric-paper.

Tests.—Sp. g. 1·073. A little of the solution heated in a test tube to expel Carbonic Acid should be neutral to test papers.

Note.—This is the corrected formula; it was printed wrongly in the first issue of the Brit. Pharm., 1885.

Dose.—20 to 60 minims diluted with water.

Preparation.

AMMONII ACETATIS LIQUOR. [MODIFIED.] Solution of Acetate of Ammonium. Mindererus Spirit.

Strong solution of Acetate of Ammonium, 1; Distilled Water sufficient to produce 5: mix.

The solution should be stored in bottles free from Lead.

Test.—Sp. g. 1·022.

Medicinal Properties.

Diaphoretic and refrigerant. Internally, it increases the secretion by the skin and kidneys, therefore useful in febrile and inflammatory diseases, and in dysmenorrhœa. Externally, in the proportion of 1 to 10 of Water, as a collyrium in chronic ophthalmia, or mixed with weak spirit for a cooling lotion.

Dose.—2 to 6 drms.; for children, ½ to 1 drm.

(Austr. sp. g. 1·030; Belg. sp. g. 1·029; Fr. sp. g. 1·036; U.S. 1·022; all made with Carbonate. Dan. sp. g. 1·038 to 1·042; Ger. sp. g. 1·032 to 1·034; and Russ. sp. g. 1·030 to 1·032; all made with Caustic Ammonia.)

A nice fever mixture is made with Liq. Ammon. Acet. ʒ ij, Ammon. Carbon. gr. viij, Succ. Limon. ʒ ij, Syrup. ʒ j, Aquæ Camphor. ℥ss, Aquæ ad ℥iv; mix; a fourth part every six hours.

Incompatibles.—Acids, Potash, Soda, and their Carbonates, Lime Water, Salts of Lead and Silver.

AMMONII BENZOAS.

BENZOATE OF AMMONIUM.

$NH_4C_7H_5O_2$, eq. 139.

Colourless laminar crystals.

Solution of Ammonia, 3, or a sufficiency; Benzoic Acid, 2; Distilled Water, 4; dissolve and evaporate, keeping the Ammonia in slight excess, and set aside to crystallize; when 3½ of Ammonia are used, it makes a neutral salt.

Solubility of the neutral Salt, 1 in 5 of Water; 1 in 22 of Rectified Spirit; 1 in 8 of Glycerine.

Tests.—When heated, it sublimes without residue. Its aqueous solution, if not too dilute, deposits Benzoic Acid when it is acidulated with Hydrochloric Acid; when heated with solution of Potash it evolves Ammonia; with persalts of Iron it gives a bulky yellowish precipitate.

Medicinal Properties.

Diuretic, employed in dropsy, and in gout when chalk-stones are deposited near the joints. It is more soluble than Benzoic Acid, and therefore acts more quickly. Is valuable in catarrhus vesicæ with alkaline urine, also in cases of phosphatic deposit. Benzoic Acid, when taken into the body, appears to take up Glycocol and forms Hippuric Acid. The Ammonia does not, like Potash and Soda, pass through the kidneys.

Stimulates the liver, but not quite so powerfully as the Benzoate of Soda; neither of them stimulates the intestinal glands.—Dr. Rutherford.

Dose.—10 to 20 grains in Water.

(Fr. and U.S.; Russ. solution 12·5 p. c.; not in Austr. Belg. Dan. or Ger.)

INCOMPATIBLES.—Persalts of Iron, Liquor Potassæ, and Acids.

AMMONII BROMIDUM.

BROMIDE OF AMMONIUM.

Syn. AMMONIUM BROMATUM.

NH_4Br, eq. 98.

In small colourless crystals, which may be sublimed unchanged. Solubility, 1 in 1½ of Water; 1 in 15 of Rectified Spirit.

Tests.—Its aqueous solution, when heated with solution of Potash, should evolve Ammonia; when mixed with a little Chlorine and agitated with Chloroform, colours the latter red (Bromine); gives only a faint cloudiness with Chloride of Barium (Sulphate). It does not give an immediate yellow colour on being moistened with diluted Sulphuric Acid (Bromate). Five grains dissolved in an ounce of Distilled Water, to which two drops of solution of yellow Chromate of Potassium have been added, require not more than 514·5 and not less than 508·5 grain-measures of the volumetric Solution of Nitrate of Silver to produce a permanent red precipitate.

Its aqueous solution does not exhibit a blue colour with Mucilage of Starch and a drop of Chlorine Water—showing absence of Iodine.

If too much Chlorine water be added, the presence of Iodine may be overlooked owing to the formation of colourless Chloride of Iodine.

Medicinal Properties.

An excellent nervine, good in hysterics; especially useful for sleeplessness of nervous persons where there is no organic disease; relieves headache and neuralgic pain, also the intolerable itching in prurigo.

For whooping cough, dose for children, 1 to 5 grs. three times a day in Water.

Dose.—5 to 20 grains.

(Fr. Ger. Russ. and U.S.; not in Austr. Belg. or Dan.)

INCOMPATIBLES.—Acids and Acidulous Salts, and Sp. of Nitrous Æther.

Not Official.

LOZENGES, containing 2 grains of Bromide of Ammonium in each, are given to children for whooping cough; also are convenient for travellers. Dose, 1 to 3 lozenges.

AMMONII CARBONAS.

CARBONATE OF AMMONIUM.

Syn.—AMMONIÆ SESQUICARBONAS.

$N_3H_{11}C_3O_8$, eq. 217.

It is considered to be a compound of Acid Carbonate of Ammonium, NH_4HCO_3, with Carbamate of Ammonium, $NH_4NH_2CO_2$, and the compound molecule is usually regarded as containing one molecule of each of these salts.

Sublimed from a mixture of Carbonate of Calcium and Sulphate or Chloride of Ammonium, and then resublimed.

Translucent crystalline masses, which have a strong Ammoniacal odour and an alkaline reaction.

Solubility, 1 in 4 of Water; 1 in 200 of Spirit; 1 in 5 of Glycerine.

Test.—52·3 grains dissolved in an ounce of Distilled Water are neutralized by 1000 grain-measures of the volumetric solution of Oxalic Acid. Volatilizes entirely when heated. If diluted Nitric Acid be added to it in slight excess it will give no precipitate with Nitrate of Silver or Chloride of Barium (absence of Chlorides and Sulphates).

(Austr. Belg. Dan. Fr. Ger. Russ. and U.S.)

Medicinal Properties.

Antacid, stimulant, sudorific, and expectorant. Frequently combined with Ipecacuanha in bronchitis. Rarely as an emetic in ½ drm. doses. 60 grs. of this, or two tablespoonfuls of Sal Volatile to 20 oz. of hot water sponged on the body refreshes it.

Dose.—3 to 10 grains in Camphor Water ½ oz., and Water 1 oz., mixed.

15 grains dissolved in water are taken with 17 grains of Citric Acid to form a saline draught.

INCOMPATIBLES.—Acids, Acidulous Salts, Earthy Salts, and Lime Water.

Preparations.

SPIRITUS AMMONIÆ AROMATICUS. Sp. SAL VOLATILE.

Carbonate of Ammonium, 4 oz.; Strong Solution of Ammonia, 8 oz.; Volatile Oil of Nutmeg, 4½ drms.; Oil of Lemon, 6½ drms.; Rectified Spirit, 6 pints (= 120 oz.); Water, 3 pints (= 60 oz.)

Place the Oils of Lemon and Nutmeg and Rectified Spirit with the Water in a retort; distil 7 pints (140 oz.), and then distil and separately collect an additional 9 oz. Place the 9 oz. of distillate, together with the Carbonate of Ammonium and the Strong Solution of Ammonia, in a bottle holding rather more than a pint (20 oz.); securely cork the bottle, and gently warm it in a water-bath to 140° F. (60° C.), shaking from time to time until all the salt has dissolved. Filter if necessary, when cold, through a little cotton wool, and gradually mix it with the 7 pints of distilled Spirit. The product should measure one gallon (160 oz.)

Tests.—Sp. g. ·896—·900. One fluid ounce requires for neutralization 558 grain-measures of the volumetric solution of Oxalic Acid. One fluid ounce, after the addition of 330 grain-measures of the test solution of Chloride of Barium, should yield after filtration a further precipitate when more of the reagent is added.

A domestic remedy for nervous headache, combined with Spirit of Chloroform.

Dose.—20 to 60 minims in Camphor Water; for children, 3 mins.

(U.S. a *mixture*, Fr. Alcoolat Aromatique Ammoniacal *distilled*; both contain Carbonate, but differ considerably from Brit. Pharm. Belg. Dan. Ger. and Russ. have Liquor or Spiritus Ammonii Anisatus, a mixture of Oil of Anise, Spirit, Liq. Ammon., but in slightly different proportions. Not in Austr.)

Contained in Tinctura Guaiaci Ammoniata, Tinctura Valerianæ Ammoniata.

Not Official.

LIQUOR VOLATILIS CORNU CERVI, or SPIRIT OF HARTSHORN.—Saturated Solution of Carbonate of Ammonia of the old Pharmacopœias, distilled from Hartshorn.

HARTSHORN AND OIL.—1 of Sp. Hartshorn and 3 of Oil of Almonds: mix.

AMMONII CHLORIDUM.

CHLORIDE OF AMMONIUM.

Syn.—Ammoniæ Hydrochloras; Ammonium Chloratum; Sal Ammoniac.

NH_4Cl, eq. 53·5.

Usually prepared by sublimation; colourless, inodorous, translucent, fibrous masses, tough and difficult to powder.

It should be recrystallized for Medicinal use.

Solubility, 1 in 3 of Water; 1 in 55 of Rectified Spirit.

Tests.—When heated it volatilizes without decomposition, and leaves no residue. Its aqueous solution evolves Ammonia when heated with Solution of Potash, and gives a white precipitate with Nitrate of Silver soluble in Ammonia.

Medicinal Properties.

Expectorant in chronic bronchitis, is a cholagogue and emmenagogue; diaphoretic, diuretic, and alterative in rheumatism, useful in portal dropsy, given in doses of 20 or 30 grs. in half a tumbler of cold water every 4 or 6 hours, in scrofulous and syphilitic enlargement of the glands; useful in hepatitis and periostitis, when the acute stage is passed and suppuration set in, said to counteract the tendency to albumenoid degeneration of any organ. In facial neuralgia, in doses of 30 grains three times a day, and relieves after 4 cr 5 doses, otherwise it is of no use to continue it. Externally rubbed moist on corns and warts removes them; as a stimulant and resolvent in bursæ and indolent tumours, also in acne simplex.

Stimulates the intestinal glands, but not the liver.—Dr. Rutherford.

B. P. Dose, 5 to 20 grains.

Dose.—10 grains in a claret-glassful (3 ozs.) of cold Water, frequently sipped, allays distressing fits of coughing in bronchitis. 10 mins. Sp. Chloroform and 30 of Syrup render it palatable. Tincture of Squill may be tried if this fails.

(Austr. Belg. Dan. Fr. Ger. Russ. and U.S.)

Incompatibles.—Alkalies, Alkaline Earths, and their Carbonates; Lead and Silver Salts.

Not Official.

Draught.—Ammonii Chloridi, gr. xv; Tinct. Limon., ♏xlv; Sp. Chloroformi, ♏x; Aquæ, ad ℥iss.

Lotion.—1 oz. with 1 oz. Rectified Spirit and 10 oz. Water; Vinegar is sometimes added, to be applied as a dressing for bruises.

Lozenges.—2 or 3 grains each, are much resorted to for bronchitis.

Dose.—2 to 4 lozenges.

AMMONII CITRATIS LIQUOR FORTIOR.

STRONG SOLUTION OF CITRATE OF AMMONIUM.

[NEW.]

Citrate of Ammonium, $(NH_4)_3C_6H_5O_7$, eq. 243, dissolved in Water. Colourless.

Strong Solution of Ammonia, 11, or a sufficiency; Citric Acid, 12; Distilled Water, a sufficiency. Neutralize the Acid with the Ammonia, adding sufficient Distilled Water to yield 24 of product.

Note.—This is the corrected formula; it was printed wrongly in the first issue of the Brit. Pharm., 1885.

The solution should be stored in bottles free from Lead.

Tests.—Sp. g. 1·209. Neutral to test-papers.

Dose.—30 to 90 minims.

(Not in Austr. Belg. Dan. Fr. Ger. Russ. or U.S.)

Preparation.

AMMONII CITRATIS LIQUOR. [MODIFIED.]

Solution of Citrate of Ammonium.

Strong Solution of Citrate of Ammonium, 1; Distilled Water, sufficient to produce 4: mix.

Test.—Sp. g. 1·062.

The solution should be stored in bottles free from Lead.

Dose.—2 to 6 fluid drms.; for children ½ to 1 drm.

(Not in Austr. Belg. Dan. Fr. Ger. Russ. or U.S.)

Not Official.

AMMONII IODIDUM.

IODIDE OF AMMONIUM.

A whitish deliquescent salt, granular or in crystals, which readily becomes yellow on exposure to air; when deeply coloured it should not be used in dispensing.

Solubility: 4 in 3 of Water; 1 in 3 of Rectified Spirit; 3 in 4 of Glycerine.

(Fr. Russ. and U.S.; not in Austr. Belg. Dan. or Ger.)

Medicinal Properties.

Similar in action to the Iodide of Potassium, but more active.

Dose.—2 to 5 grains three times a day.

An ointment of it is made with ʒij to 1 oz. of Lard, and used night and morning.

AMMONII NITRAS.

NITRATE OF AMMONIUM.

NH_4NO_3, eq. 80.

A white deliquescent salt, in confused crystalline masses, having a bitter acrid taste.

It fuses at a temperature of 320° F. (160° C.), and at 350° F. (176·7° C.) to 450° F. (232·2° C.) it is entirely resolved into Nitrous Oxide Gas, N_2O, and the vapour of water.

Solubility, 4 in 3 of Water; 1 in 14 of Rectified Spirit.

Nitrous Oxide Gas is inhaled for producing insensibility, and is much employed by dentists.

Tests.—A solution of one part in eight parts of Distilled Water gives no precipitate with solution of Nitrate of Silver or of Chloride of Barium—indicating absence of Chlorides and Sulphates.

(Russ. and U.S.; not in Austr. Belg. Dan. Fr. or Ger)

AMMONII PHOSPHAS.

PHOSPHATE OF AMMONIUM.

$(NH_4)_2HPO_4$, eq. 132.

In colourless transparent prisms, which, upon exposure to air, lose Water and Ammonia, and become opaque.

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Obtained by adding strong Solution of Ammonia to Diluted Phosphoric Acid until the solution is slightly alkaline; during the evaporation of this liquid more Ammonia should be added from time to time to keep it in slight excess, and when crystals are formed on the cooling of the solution dry them quickly on filtering paper placed on a porous tile, and preserve them in a stoppered bottle.

Solubility, 1 in 2 of Water; insoluble in Rectified Spirit.

Test.—If 20 grains be dissolved in Water, and Solution of Ammonio-sulphate of Magnesia be added, a crystalline precipitate falls, which, when well washed upon a filter with Solution of Ammonia diluted with an equal volume of Water, dried, and heated to redness, leaves 16·8 grains. The crystalline precipitate is the Ammonio-phosphate of Magnesium, and when this is heated to redness the Ammonia is driven off, and the Pyro-phosphate of Magnesium is left.

(Russ., Ammonium Phosphoricum, and U.S.: not in Austr. Belg. Dan. Fr. and Ger.)

Medicinal Properties.

Diaphoretic and discutient. Given in gout and rheumatism to render the Urates of Sodium and Calcium in the urine soluble. Of great value in cases of Uric Acid calculus.

Is a powerful stimulant of the liver. It does not stimulate the intestinal glands.—Dr. Rutherford.

Dose.—5 to 20 grains 3 or 4 times a day in Water.

Should not be prescribed in too condensed a form when tinctures form part of the mixture, on account of its sparing solubility in spirituous menstrua.

AMYGDALA AMARA.

BITTER ALMOND.

The ripe seed of the bitter almond tree, ***Prunus Amygdalus, var. amara,*** brought chiefly from Mogadore.

Introduced only for expressing the oil from it. Yields from 42 to 44 per cent.

Not Official.

Mistura Amygdalæ Amaræ.—Made in the same proportions as Mistura Amygdalæ.

Useful in cough, and as a lotion to allay itching of the skin. It was a favourite vehicle for giving Tartarated Antimony, in doses of ⅛ grain, to subdue inflammatory action of the lungs and relieve cough. The mixture contains a variable amount of Prussic Acid.

Dose, ½ to 1½ oz.

Not Official.

OLEUM AMYGDALÆ AMARÆ.

A volatile oil obtained from Bitter Almond by maceration with water and subsequent distillation.

A pale yellowish thin liquid, with a characteristic odour.

Sp. gr. 1·060—1·070 (after removal of Hydrocyanic Acid 1·045—1·050).

Sparingly soluble in water; mixes in all proportions with Rectified Spirit and Ether.

(Belg. (Essentia), Fr. and U.S.; not in Austr., Dan., Ger. or Russ.)

Chiefly used as a flavouring agent, when the oil sine Acido Hydrocyanic should be employed.

AMYGDALA DULCIS.

SWEET ALMOND.

The ripe seed of the sweet almond tree, *Prunus Amygdalus, var. dulcis*, imported from Malaga, and known as the Jordan Almond.

Test.—Not bitter nor evolving the odour of Bitter Almonds when bruised with Water.

Medicinal Properties.

Demulcent; useful in catarrhal affections. Biscuits are made of Jordan and Valencia Almonds, as a substitute for bread or starchy food for diabetic patients.

(Both Bitter and Sweet Almonds are contained in all the Pharmacopœias.)

Preparations.

MISTURA AMYGDALÆ. Like milk.

Compound Powder of Almonds, 1; Distilled Water, 8: rub the Powder with a little of the Water into a thin paste, add the remainder of the Water, and strain through muslin.

A vehicle for cough medicines.

Dose.—1 to 2 oz.

(Austr. Belg. Dan. Fr. and Ger., Emulsio; U.S.; there is much variation in the proportions.)

OLEUM AMYGDALÆ. Pale yellow.

The oil obtained by pressure from either Bitter or Sweet Almonds.

Only slightly soluble in Rectified Spirit, entirely soluble 1 in 2¼ of Ether and in all proportions of Chloroform.

Sp. g. ·914 to ·920. It does not congeal until cooled to near —20° C. (—4° F.)

Tests.—On placing 2 drops of concentrated Sulphuric Acid upon about 8 drops of the Oil, on a white plate, no dark colour should appear at the edge of the Acid, and after stirring, the mixture should not assume a dirty yellow colour retaining its tint for several minutes (difference from most other fixed Oils).—*U.S.P.*

The latter part of this test is misleading; we have examined 11 samples (three pressed by ourselves) and find that a dirty yellow is produced and that it lasts at least half an hour.

When 15 parts of the Oil are thoroughly shaken with a mixture of 2 parts of Water and 3 parts of fuming Nitric Acid, a whitish mixture, free from red or brown colour, should be formed, which should separate after several hours into a firm white mass and a nearly colourless liquid.—*Ph. Ger.*

It does *not* form a firm white mass after 18 hours; but it does so with double the amount of the diluted acid.

A colour indicates Sesame, Cotton Seed, or Rape Seed Oils; Olive Oil prevents the mass setting firm.

(Austr. Belg. Dan. Fr. Ger. Russ. and U.S.)

Dose.—2 to 4 drms.

1 oz. Oil, with ½ oz. Mucilage, ¼ oz. Sugar, and 6 oz. of Distilled Water, makes a nice cough mixture.

A mixture of equal parts of this Oil and Lime Water, scented with Lemon, is sold for Glycerine and Lime Juice.

Used in the preparation of Unguentum Cetacei, Unguentum Resinæ, and Unguentum Simplex. Used in preference to Olive Oil, as it makes a whiter ointment.

PULVIS AMYGDALÆ COMPOSITUS. A pale straw-coloured coarse powder.

Sweet Almonds, 8; Refined Sugar, 4; Gum Acacia, 1; steep the Almonds in hot Water until their skins can be easily removed, and when blanched dry them thoroughly with a soft cloth and rub them lightly into a smooth paste, then add the sugar and gum previously mixed; rub together, and pass through a coarse sieve.

Dose.—60 to 120 grains.

(Not in the other Pharmacopœias.)

AMYL NITRIS.

NITRITE OF AMYL.

An ethereal yellowish liquid, consisting chiefly of Nitrite of Amyl, $\mathbf{C_5H_{11}NO_2}$, eq. 117, produced by the action of Nitric or Nitrous Acid on Amylic Alcohol, which volatilizes between 262° and 270° F. (or about 128°—132° C.)

Various writers have pointed out the importance of purifying the Amylic Alcohol, until it has a constant boiling point 132° C., previous to using it. Also that the impure Nitrite of Amyl obtained should be washed with Caustic Soda to remove Prussic Acid and other free Acids, and finally rectified over fused Carbonate of Potassium to get rid of the Water, reserving the portion which distils over between 95° and 100° C. (203°—212° F.) for medicinal use.

Brit. Pharm., 1885, has been more explicit about the Amylic Alcohol to be used, but "Nitrite of Amyl" is a fluid which varies in its composition and purity with the process employed for its production. It is also changed by exposure to the air.

Insoluble in Water. Freely soluble in Rectified Spirit, Ether, and Chloroform.

Tests.—Sp. g. about 0·880. Submitted to distillation, about 70 per cent. passes over at 194° to 212° F. (90°—100° C.), the bulb of the thermometer not dipping below the surface of the residual fluid. If it be added drop by drop to Caustic Potash while fused by the application of heat, Valerianate of Potassium will be formed.

(Belg. sp. g. ·870, boils 95° C.; Fr. sp. g. ·877, boils 95° C.; Ger. boils 97°—99° C.; Russ. sp. g. ·900, boils 93° C.; U.S. sp. g. ·872—874, boils about 96° C.)

Medicinal Properties.

Anodyne, very useful in angina pectoris, asthma, and nervous headache. A restorative in cases of defective breathing, or the heart's want of power after chloroform; has been found useful as an antidote to Strychnia.

Employed successfully in cases of sea-sickness.—*Lancet*, May 3, 10, 24, 1879.

Dose.—By inhalation, the vapour of 2 to 5 minims; to be used with caution.

It can be obtained in small glass tubes covered with cotton wool.

AMYLUM.

STARCH.

Starch procured from the grains of common wheat, *Triticum Sativum;* maize, *Zea Mays;* and rice, *Oryza Sativa.*

The Brit. Pharm. gives the following microscopic characters:—

1. Wheat Starch: A mixture of large and small granules, which are lenticular in form and marked with faint concentric striæ surrounding a nearly central hilum.

2. Maize Starch: Granules more uniform in size, frequently polygonal, somewhat smaller than the large granules of Wheat Starch, and having a very distinct hilum, but without evident concentric striæ.

3. Rice Starch: Granules extremely minute, nearly uniform in size, polygonal, hilum small and without striæ.

This is the first time that Starches other than Wheat have been recognised in the British or the other Pharmacopœias.

In fine powder or in irregular angular or columnar masses, which when boiled with water and cooled become blue on adding a solution of Iodine. The blue disappears on boiling. When lightly rubbed in a mortar with a little cold Distilled Water the mixture is neither acid nor alkaline to test-paper, and the filtered liquid does not become blue on the addition of Iodine.

Medicinal Properties.

A good application to the face and hands when affected by cutaneous eruptions. In the form of Violet Powder, which is merely scented Starch, it is useful to prevent the low inflammation that may be caused by the chafing of the skin of fat infants. Applied also in cases of inflamed veins. It has been given in powder for Diarrhœa.

(Austr. Belg. Dan. Ger. Russ. and U.S.; Fr. Amidon: all Wheat Starch.)

Preparations.

GLYCERINUM AMYLI. Plasma. An opaque, soft-solid jelly. [ALTERED.]

Starch, 1; Glycerine, 5; Distilled Water, 3; stir them well together in a porcelain dish or other suitable vessel, then heat the mixture gradually to 240° F., constantly stirring until a translucent jelly is formed. (By weight 1 in 8½, by measure 1 in 7½).

Note.—Water has been added in this formula with a view to the preparation being less liable to change when kept for some time.

(Austr. Ung. Glycerini, Starch 1, Glycerine 15; Belg. Starch 1, Glycerine 16 (nearly); Dan. Starch 2, Water 1, Glycerine 10; Fr. Glycéré d'Amidon, Starch 1, Glycerine 14; Ger. Ung. Glycerini, Tragacanth 1, Alcohol 5, Glycerine 50; Russ. Ung. Glycerini, Starch 1, Water 1, Glycerine 14; U.S. Starch 1, Glycerine 9.)

MUCILAGO AMYLI.

Starch, 120 grains; Distilled Water, 10 fluid ounces; boil with stirring, for a few minutes. =(1 grain in 40 minims).

Used in enemas, either in large quantity, as a vehicle for purgatives, or in small quantity for sedatives or astringents, which are to be retained and absorbed As an enema *per se*, it is soothing and slightly astringent, and is useful in typhoid fever when the object is rather to regulate than arrest the diarrhœa. It is used extensively to stiffen bandages for fractures, &c.

(Fr. Lavement avec l'amidon, 1 in 34; Russ. Decoctum, 1 in 49; not in the others.)

Not Official.

AMYLUM IODATUM.

U.S.P.—Iodine, 5; Starch, 95; Distilled Water, q. s. Triturate the Iodine with a little Distilled Water, add the Starch gradually, and continue triturating until the compound assumes a uniform blue colour approaching black. Dry at a temperature not exceeding 40° C. (104° F.) and rub it to a fine powder.

This is practically the formula given in *Brit. Med. Jour*. May 1, 1880, and which was published in our last edition. A teaspoonful thrice daily for Lupus Erythematodes.

(Russ. Iodine, 1; Starch, 29; Alcohol (95 p. c.), 10; not in Austr. Dan. Fr. or Ger.; it is now omitted in Belg.)

ANETHI FRUCTUS.

DILL FRUIT.

The dried fruit of the *Peucedanum graveolens* (an annual), cultivated in Britain or imported from Central and Southern Europe.

(Fr. Aneth; not in the others.)

Medicinal Properties.

Stimulant, aromatic, and carminative: chiefly given to children in cases of flatulency, or hiccough.

Preparations.

AQUA ANETHI.

Bruised Dill Fruit, 1; Water, 20; distil, 10. =(1 in 10)

(Not in the other Pharmacopœias.)

Dose.—½ to 1 oz.; for children, 60 minims.

A vehicle to cover the taste of Soda Salts.

OLEUM ANETHI. Pale straw-colour.

The oil distilled in Britain from Dill Fruit.

Sp. g. about ·900. Yield, 2·8 to 3 per cent.

The samples we have examined varied sp. g. ·895—·907.

Readily soluble in Alcohol and Ether.

(Not in the other Pharmacopœias.)

Dose.—1 to 4 minims, on Sugar.

ANISI FRUCTUS.

ANISE FRUIT.

The dried fruit of *Pimpinella Anisum.*

(Austr. Belg. Dan. Fr. Ger. Russ. and U.S.)

Medicinal Properties.

Stimulant, aromatic, and carminative, slightly expectorant; used to relieve flatulence, and to diminish the griping of purgative medicines.

Preparations.

AQUA ANISI. [NEW.]

Bruised Anise Fruit, 1; Water, 20; distil, 10.

(Belg. from Oil and Alcohol; Fr. from Fruits; Russ. from Oil; U.S. from Oil; not in Austr. Dan. or Ger.)

Dose.—½ to 1 oz.

OLEUM ANISI. *See* ANISI OLEUM.

(Austr. Belg. (essentia) Dan. Fr. Ger. Russ. and U.S.)

ANISI STELLATI FRUCTUS.

STAR ANISE FRUIT.

The dried fruit of *Illicium Anisatum*, from plants cultivated in China

(Austr. Belg. Dan. Fr. Russ. and U.S.; not in Ger.)

Preparation.

OLEUM ANISI. *See* ANISI OLEUM.

(U.S.; not in Austr. Belg. Dan. Fr. Ger. or Russ.)

ANISI OLEUM.

OIL OF ANISE.

The oil distilled in Europe from Anise Fruit (yields about 2 per cent.), or distilled in China from Star Anise Fruit (yields 4 to 5 per cent.), and imported.

As in the P. B., 1867, both the European and Chinese Oils of Anise are Official.

Colourless, or a very pale yellow.

Soluble 1 of Illicium Oil in 4 of Rectified Spirit; 1 of Pimpinella Oil in 2 of Rectified Spirit; both oils dissolve in all proportions of Absolute Alcohol; neither of the oils dissolve *entirely* in Proof Spirit.

Oil of Anise congeals between 50° and 60° F. (10° to 15·5° C.), and may remain solid at 62° or 63° F. (16·7° to 17·2° C.)

Oil of Star-Anise congeals at a few degrees above the freezing point of water.

Sp. g. about ·980, which increases with age.

(Belg. sp. g. ·972—·975; Ger. and Russ. sp. g. ·980—·990; U.S. sp. g. ·976—·990.)

Dose.—1 to 4 minims, on sugar.

(For foreign Pharmacopœias, *see* under Fructus.)

Contained in Tinctura Camphoræ Comp. and Tinctura Opii Ammoniata.

Preparations.

ESSENTIA ANISI. Colourless.

Oil of Anise, 1; Rectified Spirit, 4; mix. =(1 in 5).

(Belg. 1 Oil in 100; Fr. 1 Oil in 50; U.S. Spiritus, 1 Oil in 10; all by weight; Austr. from seeds; not in Dan. Ger. or Russ.)

Dose.—10 to 20 minims.

Not Official.

TINCTURA ANISI (Fr. and Russ.)—Anise Fruit, 1; Rectified Spirit, 5.

ANTHEMIDIS FLORES.

CHAMOMILE FLOWERS.

The dried flower-heads of *Anthemis nobilis*, (perennial) single and double, from cultivated plants.

Medicinal Properties.

Tonic, aromatic, and stomachic. In large doses, emetic. The infusion taken early every morning is useful in atonic dyspepsia.

(Austr. Belg. Dan. Fr. Russ. and U.S.; not in Ger.; also Matricaria in Austr. Belg. Dan. Fr. Ger. Russ. and U.S.)

Preparations.

EXTRACTUM ANTHEMIDIS. Deep brown.

Chamomile Flowers, 16 oz.; Oil of Chamomile, 15 minims; Distilled Water, a gallon; boil the flowers in the Water till the volume is reduced to one-half, then strain, press, and filter; evaporate the filtered liquor by a water bath to a pill consistence, adding the Oil of Chamomile at the end of the process.

Dose.—2 to 10 grains.

(Fr. (Camomille), Belg. Dan. and Russ., Chamomillæ; not in Austr. Ger. or U.S.)

INFUSUM ANTHEMIDIS.

Chamomile Flowers, ½; boiling distilled Water, 10; infuse for fifteen minutes in a covered vessel. =(1 in 20).

Dose.—As a stomachic, 1 to 3 oz.; as an emetic, 5 to 10 oz.

(Fr. (Tisane) 1 in 200; not in Austr. Belg. Dan. Ger. Russ. or U.S.)

OLEUM ANTHEMIDIS.

Distilled in Britain from the flowers.

Sp. g. ·905—·915. Pale blue or greenish blue, gradually becoming yellowish brown by keeping.

Solubility, sparingly in water; 10 in 3 of Rectified Spirit; 1 in 40 Proof Spirit, forms an opalescent solution.

1 cwt. of flower-heads yields about 1⅓ oz. Essential Oil.

Dose.—1 to 4 minims.

(Belg. (Essentia); Fr. (Huile Volatile); Russ. Oleum Chamomillæ Citratum; not in Austr. Dan. Ger. or Russ.)

NOTE.—Oleum Anthemidis, Belg. and Fr., Flowers 1, Olive Oil 10.

Stimulant and carminative. Prescribed in pills with Rhubarb or other powder.

Not Official.

ANTIMONIUM.

ANTIMONY.

Sb, eq. 122.

Of a silvery-white colour, brittle and crystalline. Sp. g. 6·7.

This metal rarely occurs native, but generally as the black sulphuret (Sulphide), the Stibium of the ancients. It was first made known in the metallic state by Basil Valentine towards the end of the fifteenth century. It is prepared on the large scale by roasting the sulphuret (mixed with charcoal to prevent caking) until it is converted into oxide, which is then reduced by means of Charcoal and Carbonate of Potassium. It is extensively employed in the manufacture of type-metal and the alloy known as Britannia metal. It melts at about 800° F., and as the ingot cools, its surface has a beautiful stellated appearance: the alchemist considered this star as a mysterious guide to the secrets of transmutation. It is volatile at a white heat.

ANTIMONII CHLORIDI LIQUOR.

SOLUTION OF CHLORIDE OF ANTIMONY.

Chloride of Antimony, $SbCl_3$, eq. 228·5, dissolved in Hydrochloric Acid.

A yellowish-red liquor; prepared by boiling Purified Black Antimony in Hydrochloric Acid; introduced chiefly for the purpose of preparing the Oxide of Antimony.

Test.—Sp. g. 1·470. 1 fluid drm., mixed with a solution of ¼ oz. of Tartaric Acid in 4 oz. of Water, forms a clear solution, which, if treated with Sulphuretted Hydrogen, gives an orange precipitate, weighing, when washed and dried at 212° F. (100° C.), at least 22 grs.

Medicinal Properties.

A caustic; it usually acts without causing much pain or inflammation, and after the separation of the eschar forms a clean healthy ulcer. Sometimes applied to cancerous growths. Never used internally.

(Austr. and Fr. a crystalline mass; Belg. sp. g. 1·40—1·44; Dan. sp. g. 1·44—1·45; Russ. sp. g. 1·34—1·36; not in Ger. or U.S.)

ANTIDOTES.—Magnesia, Carbonate of Sodium.

ANTIMONII OXIDUM.

OXIDE OF ANTIMONY.

Sb_2O_3, eq. 292.

A greyish-white powder, fusible at a low red heat.

Prepared by decomposing a solution of Chloride of Antimony with Carbonate of Sodium.

Solubility. Insoluble in Water, Alcohol, and Nitric Acid; readily soluble in Hydrochloric Acid and warm solution of Tartaric Acid.

Test.—Dissolves entirely when boiled with an excess of Acid Tartrate of Potassium—indicating absence of other oxides of Antimony.

The solution in Hydrochloric Acid, when mixed with Distilled Water, forms a white deposit, which is changed to orange by Sulphuretted Hydrogen.

A solution of Oxide of Antimony in an excess of Tartaric Acid should yield no precipitate with test-solutions of Nitrate of Silver (Chloride), Chloride of Barium (Sulphate), or Ferrocyanide of Potassium (Iron and other metals).—*U.S. Ph.*

Medicinal Properties.

Diaphoretic. Less active than the tartrate.

Dose.—1 to 3 grs. in a pill.

(Belg. Dan. (Stibicum Oxidum) Fr. and U.S.; not in the others.)

Preparation.

PULVIS ANTIMONIALIS. A white powder.

Oxide of Antimony, 1; Phosphate of Calcium, 2; mix. =(1 in 3).

Dose.—2 to 6 grs.

(Belg. Oxide of Antimony 334, Phosphate of Lime 666; U.S. Oxide of Antimony 33, Precipitated Phosphate of Calcium 67; not in Austr. Dan. Ger. or Russ.)

The following analysis was made by Robert Scott, of Dublin, of a very old packet of James's Fever Powder (bearing Messrs. Newbery's name) for the British Pharmacopœia Committee:—

Soluble in Water—	Antimonite of Lime	·095
	Sulphate of Lime	·267
	Alkaline Salts	·220
Insoluble in Water—	Antimonious Acid	33.216
	Teroxide of Antimony	·601
	Phosphate of Lime	62·124
	Lime	1·954
	Residue	1·603
	Loss	·502
		100·000

ANTIMONIUM NIGRUM PURIFICATUM.

PURIFIED BLACK ANTIMONY.

Syn. PREPARED SULPHURET OF ANTIMONY.

Native Sulphide of Antimony, $\mathbf{Sb_2S_3}$, eq. 340, purified from Siliceous matter by fusion, and reduced to fine powder, and if any soluble Salt of Arsenium be present, must be repurified with solution of Ammonia.

Dissolves almost entirely in boiling Hydrochloric Acid, evolving Sulphuretted Hydrogen, and the solution affords a white precipitate when poured into Water.

Used to prepare Antimonium Sulphuratum and Liquor Antimonii Chloridi.

ANTIMONIUM SULPHURATUM.

SULPHURATED ANTIMONY.

Syn. ANTIMONII OXYSULPHURETUM; ANTIMONII SULPHURETUM AUREUM; ANTIMONII SULPHURETUM PRÆCIPITATUM.

Sulphide of Antimony, $\mathbf{Sb_2S_5}$, with a small and variable amount of Oxide of Antimony, $\mathbf{Sb_2O_3}$.

A bright orange or golden-red powder, without odour and with a slight taste.

Insoluble in Water; dissolves readily in Caustic Soda, also in hot Hydrochloric Acid.

Test.—60 grains moistened and warmed with successive portions of Nitric Acid until red fumes cease to be evolved, and then dried and heated to redness, gives a white residue weighing about 40 grains.

Distilled Water boiled with Sulphurated Antimony, filtered and acidulated with Hydrochloric Acid, should be rendered not more than slightly opalescent by test solution of Chloride of Barium (limit of Sulphate).—*U.S.P.*

Medicinal Properties.

Alterative, diaphoretic, and emetic; uncertain in action from its slight solubility, depending on the acidity of the stomach. Usually prescribed with Calomel and Guaiacum, as in Pilula Hydrargyri Subchloridi Composita, for secondary syphilis and cutaneous eruptions; or with Henbane or Hemlock in chronic rheumatism.

Dose.—1 to 5 grs. in pill.

(U.S. Antimonium Sulphuratum; Austr. Belg. Ger. and Russ., Stibium Sulphuratum Aurantiacum.)

Contained in Pilula Hydrargyri Subchloridi Composita.

ANTIMONIUM TARTARATUM.

TARTARATED ANTIMONY. TARTAR EMETIC.

An Oxytartrate of Antimony and Potassium $\mathbf{(KSbOC_4H_4O_6)_2H_2O}$, eq. 668.

In colourless transparent crystals, exhibiting triangular facets.

Solubility, 1 in 15 of cold Water (slowly); 1 in 2 of Boiling Water; sparingly soluble in Proof Spirit; insoluble in Rectified Spirit.

Tests.—29 grs. (after some time) dissolve without residue in a fluid ounce of Distilled Water at 60° F. (15·5° C.), and the solution gives with Sulphuretted Hydrogen an orange precipitate which, when washed and dried at 212° F. (100° C.), weighs 15·1 grs. (Golden Sulphuret of Antimony.) Its solution in Water gives with Hydrochloric Acid a white precipitate, soluble in excess, which is not formed if Tartaric Acid be previously added.

Medicinal Properties.

Diaphoretic, expectorant, depressant, and emetic. Given with Sal Volatile, or Bitter Almond Emulsion, is less likely to produce nausea. Relieves the chest in pneumonia and in bronchitis. In continued small doses it relaxes, and causes increased secretion from the mucous membranes and skin, and is a *depressant* to the whole vascular system.

As a febrifuge, it is given either in aqueous solution, or as Vinum. In repeated small doses it is used in midwifery in cases of rigidity of the os uteri, or heat and dryness of the passages.

Externally, in the form of ointment, it acts as a powerful irritant to the skin, producing a pustular eruption. Is used as a counter-irritant for children: it should, however, be applied with great caution, both on account of its highly irritant properties, and its liability to be absorbed into the system.

Dose.—As a diaphoretic, $\frac{1}{16}$ to $\frac{1}{6}$ gr.; as a depressant, $\frac{1}{6}$ to 1 gr.; as an emetic, 1 to 2 grs.

(Austr. Kalium Stibio-Tartaricum; Belg. Tartras Antimonico Potassicus; Dan. Tartras Stibico-Kalicus; Fr. Tartrate d'Antimoine et de Potasse; Ger. Tartarus Stibiatus; Russ. Stibio-Kali Tartaricum; U.S. Antimonii et Potassii Tartras.)

INCOMPATIBLES.—Gallic and Tannic Acids, the Alkalies, and Lead Salts. Astringent infusions, as Bark, Rhubarb, &c.

ANTIDOTES.—In case of poisoning by Tartar Emetic, the antidotes are, Tannic Acid, Catechu, vegetable astringents.

Preparations.

UNGUENTUM ANTIMONII TARTARATI. White.

Tartarated Antimony in fine powder, 1; Simple Ointment, 4; mix. =(1 in 5).

(Austr. Ung. Autenriethi; Belg. Ung. Tartari Stibiati, 1 in 6·6; Fr. Pommade Stibiée, 1 in 4; Ger. Ung. Tartari Stibiati; Russ. Ung. Stibio-Kali Tartarici; all 1 in 5; not in Dan. or U.S.).

VINUM ANTIMONIALE. Pale yellowish-brown.

Tartarated Antimony, 40 grs.; Sherry, 20 oz.: dissolve, and filter if necessary. =(1 in 219).

Note.—The Tartarated Antimony does not dissolve in the Sherry readily; it is better to dissolve it in about ten times its weight of hot Water, and then add the Wine.

Each fluid drachm contains $\frac{1}{4}$ grain.

Dose.—5 to 30 minims as a diaphoretic, in saline mixtures combined with Mindererus Spirit to relieve cough. 2 mins. for a child one year old.

(Dan. and Ger. Vinum Stibiatum, 1 in 250; U.S. Vinum Antimonii, 1 in 250; all with Sherry. Austr. V. Stibiato-Tartaricum, 1 in 250; Belg. V. Antimoniatum, 1 in 200; Russ. V. Stibio-Kali Tartarici, 1 in 240; all with Malaga Wine; not in Fr.)

Not Official.

ANTIPYRIN.

DIMETHYLOXYCHINIZIN.

$C_{11}H_{12}N_2O$, eq. 188.

A synthetically prepared alkaloidal compound, reported upon by Professor Filchne and others as possessing valuable antipyretic properties.

This compound has been officially recommended to be included in the next edition of the Pharm. Ger., and the following description has been drawn up by the Ph. Committee of the Ger. Ph. Association:—

In fair-sized prismatic colourless crystals or as a nearly white crystalline powder, with a scarcely perceptible odour and mildly bitter taste; melts at 110—113° C.

Solubility: 1 in 1 of Water; 3 in 4 of Rectified Spirit; about 5 in 6 of Chloroform; 1 in 40 of Ether.

Tests.—The aqueous solution (1 in 100) gives with solution of Tannic Acid an abundant white precipitate. Treated with fuming Nitric Acid (2 drops of Acid to 2 c. c. of solution) it turns green, and if then boiled and another drop of Acid added it is coloured red. 2 c. c. of a more dilute solution (1 in 1000) gives with 1 drop of solution of Perchloride of Iron a deep red colour, which upon the addition of 10 drops of concentrated Sulphuric Acid passes into bright yellow. An aqueous solution (1 in 2) should be neutral, colourless, or faintly yellowish, free from acridity, and not altered by Sulphuretted Hydrogen.

Medicinal Properties.

Given in doses of 60 to 90 grains, generally in 2 or 3 portions at an hour's interval in powder or solution, the general effect is a depression of temperature for at least 5 hours. The temperature falls gradually and continuously to the extent of 2° to 4° F., accompanied by a fall in pulse rate and, in cases of great depression, with profuse sweating. Injected subcutaneously, it has a more powerful and rapid influence, 30 grains thus injected being equal to 60—90 grains taken by the mouth. (*Lancet*, July, 1884, p. 32.)

Death from Antipyrin. (*Lancet*, Feb., 1885, p. 382.)

Doubtful advantages. (*Lancet*, Nov., 1885, p. 865.)

Dose.—15 to 30 grs. hourly.

APOMORPHINÆ HYDROCHLORAS.

HYDROCHLORATE OF APOMORPHINE.

$C_{17}H_{17}NO_2$, HCl, eq. 303·5.

[NEW.]

The Hydrochlorate of an alkaloid obtained by heating Morphine or Codeine in sealed tubes with Hydrochloric Acid.

Small greyish white shining acicular crystals, turning green on exposure to light and air, with a very faint acid reaction on moistened Litmus paper.

Now included in B. P. was a Not Official in Companion 1871.

NOTE.—It should be kept in small well-stoppered vials in a dark place.

Solubilities, 1 in 70 of Water; 1 in 50 of Rectified Spirit; nearly insoluble in Chloroform and in Ether.

Its aqueous solution on being gently warmed rapidly turns green.

Tests.—Solution of Bicarbonate of Sodium added to an aqueous solution of the Salt throws down the white amorphous alkaloid, which becomes green on standing, and forms a bluish-green solution with

Alcohol, a purple one with Ether or pure Benzol, and violet with Chloroform; with dilute solution of Perchloride of Iron it gives a deep red, and with Nitric Acid a blood-red coloration.

(Ger. and U.S.; Fr. Apomorphine; not in Austr. Belg. Dan. or Russ.)

Preparation.

INJECTIO APOMORPHINÆ HYPODERMICA. [NEW.]

Hydrochlorate of Apomorphine, 2 grs.; Camphor Water, 100 mins.: dissolve and filter. The solution should be made as required for use.

B. P. Dose, by subcutaneous injection.—2 to 8 minims (= $\frac{1}{25}$ — $\frac{1}{6}$th grain).

Medicinal Properties.

It is a powerful emetic, and usually acts promptly without the production of much nausea or depression. The solution turns green in a day or two, but retains its activity. Hypodermic injection of 5 minims of 1 in 50 solution as an emetic. (Murrell on Poisons.)

AQUA.

WATER.*

The Pharmacopœia orders the purest Water that can be obtained, cleared, if necessary, by filtration, free from odour, unusual taste, and visible impurity, to be used whenever "Water" is ordered in the British Pharmacopœia. In dispensing prescriptions Aqua should be understood to mean Distilled Water. Water obtained in different localities varies much in respect to its purity, and the earthy and saline matters *actually dissolved* in it cannot be separated by filtration alone.

The purest water is from the Wenham Lake ice and the Norwegian ice. After these may be taken Distilled Water and snow-water. Rain-water contains about a millionth part of Ammonia, and probably about the same amount of Chloride of Sodium. The following table will show how great a difference exists in the quantity of Lime and saline matters dissolved in various natural waters:—

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* One cannot resist expressing a few thoughts on this all-important fluid, without which all animal and vegetable life must cease. Water exists in the liquid, solid, and gaseous states, and on one or other of these we mainly depend for our mechanical power and our mode of travelling by sea and by rail. Its beauty is shown in the clouds, the rainbow, the dew, hoar-frost, crystals of snow, and the glaciers. Water is endowed with the remarkable property of being at its greatest density at the temperature of 39·5° F., so that ice at 32° F. floats upon it, and aquatic life is preserved in the coldest winter.

Twenty-five measured ounces at 212° become 24 at 60° F., and 23$\frac{3}{4}$ at 39·5° F., its greatest density.

The pressure of the atmosphere will support 36 feet of Water, and a Water Barometer was erected in the Royal Society's House, by Professor Daniel, and 3000 hourly observations were made, comparing it with the Standard and the Mountain Barometers, and it was found uniformly to be an hour in precession of them in the changes. R. S. Trans. 1832.

A Glycerine Barometer is now in use at Printing House Square, and the markings are reported in the *Times*, 323 inches of the Glycerine Barometer being equal to 30·35 inches of the Mercurial Barometer.

Loch Katrine, supplying Glasgow,	contains	2 grs.	in the gallon.
River Dee ,, Aberdeen	,,	4	,,
,, Tay ,, Perth	,,	5	,,
Water supplied to Liverpool	,,	5	,,
Claremont Water	,,	5·7	,,
Farnham, in Surrey	,,	7·25	,,
Thames, supplying London	,,	19 to 22	,, according to locality.
Water supplied to Watford	,,	22·75	,,
Spring Water	,,	40 to 60	,,
River Jordan	,,	75	,,
,, after 3 weeks' rain	,,	65	,,
Sea-water, shores of the Baltic	,,	1100	,,
,, Firth of Forth	,,	2100	,,
,, off Boulogne	,,	2240	,,
,, German Ocean	,,	2380	,,
,, open Atlantic, Canaries	,,	2450	,,
,, English Channel, near Havre		2520	,,
,, Bay of Biscay, Bayonne	,,	2660	,,
,, Mediterranean, Marseilles	,,	2870	,,
Dead Sea Water (sp. gr. 1·211)		17200	(Marcet).
,, after 3 weeks' rain (sp. gr. 1·180 Squire).			

Professor Clark, of Aberdeen, invented a soap test, made by dissolving 1 oz. of white curd soap in one gallon of Proof Spirit, to ascertain the amount of Lime in Water; and proposed a method of softening all waters impregnated with Carbonate of Lime held in solution by Carbonic Acid, by adding so much lime-water as is capable of uniting with the Carbonic Acid. The whole of the Carbonate of Lime in the water, as well as that produced by the action of the Carbonic Acid upon the lime-water added, is precipitated, leaving the water comparatively pure. By this process three-fourths of the hardness of Thames water are removed; and the water which rises at Watford from the Chalk is reduced by Clark's process from 18 degrees of hardness to 2 or 3 degrees. Care, however, must be taken not to add more lime-water than is just sufficient for the purpose, otherwise this agent will contaminate the water. For further particulars the reader is referred to the *Pharmaceutical Journal*, vol. vi. p. 526 (May, 1847).

The Thames water, when supplied for long voyages, after being kept in tanks about four months, undergoes a kind of fermentation, which lasts for a few weeks, and after this change the water becomes bright, pleasant to drink, and will keep for months or years without further change, a property which belongs to scarcely any other river water.

Attention has been drawn to the contamination of drinking waters by the infiltration of sewage; and several wells, previously esteemed for the brilliancy and cool taste of the water, have since been abandoned as being totally unfit for drinking or culinary purposes.

AQUA DESTILLATA. H_2O, eq. 18.

Purest water distilled through a block-tin worm, rejecting the first portion that comes over, and distilling only three-fourths of the whole.

Distilled water has, when freshly drawn, an unpleasant odour, which is removed by passing it through a charcoal filter, or by exposing it to air, but Carbonic Acid is in that case absorbed by it, and Subacetate of Lead will then render it milky. If water is distilled through leaden pipes, it becomes impregnated with lead; the same is the case with natural soft water passing through leaden pipes. The royal buckhounds were poisoned at Ascot from this cause. Zinc wire reaching the whole length of the column of water so impregnated displaces the Lead. Water containing Sulphate of Lime seems less likely to become impregnated with Lead than that containing the Chlorides.

The transparency and colour of Distilled Water when fresh drawn should not be affected by Lime Water, Hydrosulphuric Acid, Chloride of Barium, Oxalate of Ammonia, Nitrate of Silver, or a mixture of Starch Mucilage and Iodide of Potassium. It should give only a faint yellow coloration when a solution of Potassio-mercuric Iodide (Nessler reagent) is added to 3 or 4 oz.

The waters of the British Pharmacopœia, which are all distilled, except Aq. Camphoræ and Aq. Chloroformi, are as follows; the formulæ are given under the names of the substances from which they are prepared.

AQUA ANETHI. From the dried fruit.	Dose, ½ to 1 oz.
AQUA ANISI. From dried Anise fruit.	½ to 1 oz.
AQUA AURANTII FLORIS. From the flowers. Imported.	½ to 1 oz.
AQUA CAMPHORÆ. (Formerly Mistura Camphoræ.)	1 to 2 oz.
AQUA CARUI. From the dried fruit.	1 to 2 oz.
AQUA CHLOROFORMI.	½ to 2 oz.
AQUA CINNAMOMI. From the bark.	½ to 1 oz.
AQUA DESTILLATA.	
AQUA FŒNICULI. From the dried fruit.	1 to 2 oz.
AQUA LAUROCERASI. From fresh leaves.	10 to 60 min.
AQUA MENTHÆ PIPERITÆ. With oil and distilled.	1 to 2 oz.
AQUA MENTHÆ VIRIDIS. With oil and distilled.	1 to 2 oz.
AQUA PIMENTÆ. From the dried unripe berries.	1 to 2 oz.
AQUA ROSÆ. From the fresh petals.	½ to 1 oz.
AQUA SAMBUCI. From the fresh flowers.	½ to 1 oz.

It was thought proper in former Pharmacopœias to add spirit to the several distilled Medicated Waters, to preserve them from change, but Mr. Warrington has shown, by experiment, that this is an error. He kept bottles of Dill and Anise Waters with and without spirit for two years, and found that those without spirit kept well, whilst those with spirit had become acidified by the spirit changing into Acetic Acid.

ARAROBA.

See CHRYSAROBINUM.

Not Official.

ARECA.

The seed of the Areca Catechu, Linn., the betel-nut tree. Imported from the East Indies. A remedy for tape-worm. A paste is also made of the powder for a dentifrice.

60 grains of powdered Areca Nut made into a ball with Honey answers well as a vermifuge for a large dog.

This was Official in 1867 Brit. Pharm., but is omitted in 1885 edition.

Not Official.

ARGENTUM.

SILVER.

Ag, eq. 108.

A white, malleable, ductile, and tenacious metal, bears a brilliant polish, and is soft when pure. Sp. g. 10·5; fuses at between 1800° and 1900° F. It was one of the earliest known metals, the Luna or Diana of the alchemists. It occurs native, sometimes arborescent, sometimes in masses; it is seldom, however, pure. The mines of Peru and Mexico are the richest. The mines of Saxony, Bohemia, Swabia, and Kongsberg in Norway, are the richest in Europe. It has been found in Cornwall and Devonshire as a sulphuret.

Silver is readily acted on by Sulphuretted Hydrogen.

Soluble in Nitric Acid, and precipitated by Hydrochloric Acid.

ARGENTI NITRAS.

NITRATE OF SILVER. LUNAR CAUSTIC.

$AgNO_3$, eq. 170.

In colourless tabular right rhombic prisms, or in white cylindrical rods.

Solubility, 100 grains in 50 minims of Water, measuring 80 minims; 1 in 18 of Rectified Spirit.

Tests.—An aqueous solution gives, with Hydrochloric Acid, a curdy white precipitate, soluble in Ammonia. 10 grains dissolved in 2 fluid drachms of Distilled Water give, with Hydrochloric Acid, a curdy white precipitate (Chloride of Silver), which, when washed with hot Distilled Water and thoroughly dried, weighs 8·44 grains—indicating the proper amount of metal. The filtrate, when evaporated by a water bath, leaves no residue—indicating absence of impurities. Nitrate of Silver may be adulterated with Nitrate of Sodium or Potassium, and these, of course, will remain after the Chloride of Silver has been precipitated and removed.

Medicinal Properties.

Tonic and antispasmodic. It is considered a reliable remedy in epilepsy, though its *modus operandi* is not perfectly understood. It is said to produce most good in this disease when it acts upon the bowels. It is useful in cholera and angina pectoris, as well as in chronic diseases of the stomach accompanied with pain and vomiting. 1 gr. in pill has been given three times a day for six or eight weeks, for ulceration of the stomach, with great success. In typhoid fever, for inflammation and ulceration of the ileum, in pills, dose ¼ to ½ grain; if diarrhœa be the principal symptom, an injection of 3 or 4 grains to 6 fluid ounces of Water is useful to promote cicatrization of internal ulcers. The discoloration of the skin occasioned by its use is first indicated by a dark line on the edges of the gums. This is said to be removed by a steady course of Acid Tartrate of Potassium. Points are applied externally to poisoned wounds, pustules, ulcers, and erysipelatous inflammations, also to uterine polypi; 2 to 4 grains to the ounce is employed for lotions or injections, or as a collyrium for ulcers of the cornea and aphthous affections of the mouth: it is an excellent application for sore nipples. Sir G. D. Gibb employed 30 to 40 grains to the ounce to inject on the larynx; 10 grains to the ounce are used to sponge a relaxed throat, or 20 grains to the ounce for diphtheria, and for favus.

Swollen chilblains are sometimes painted with a strong solution of Nitrate of Silver.

Strong Solution of Iodide of Potassium, or Cyanide of Potassium, will remove the black stains on the skin produced by Nitrate of Silver.

Dose.—$\frac{1}{6}$ to $\frac{1}{3}$ gr. or more. Prescribed in pills with Kaolin ointment.

$\frac{1}{20}$ gr. 3 times a day is a good nerve tonic.

(Austr. Belg. Dan. Fr. Ger. Russ. and U.S.)

INCOMPATIBLES.—The Alkalies and their Carbonates, the Chlorides, and all Acids (except Nitric and Acetic); Iodide of Potassium, Solutions of Arsenic, and astringent infusions.

ANTIDOTES.—In cases of poisoning by Nitrate of Silver, the antidote is solution of Common Salt, dissolved in water, milk, or some demulcent drink, and given freely.

Preparations.

ARGENTI ET POTASSII NITRAS. [NEW.]

Nitrate of Silver, 1; Nitrate of Potassium, 2: fuse and mix thoroughly together in a capsule of platinum or thin porcelain, and pour the melted mass into proper moulds. =(1 in 3).

Now included in the B. P.; was a "Not Official" in Companion 1867.

Tests.—30 grs. dissolved in $\frac{1}{2}$ oz. of Distilled Water gives with Hydrochloric Acid a precipitate which, when washed with hot Distilled Water and thoroughly dried, weighs 8·44 grs.

(Austr. and Ger. Argentum Nitricum c. Kalio Nitrico, 1 in 3; Dan. Nitras Argenticus bis Mitigatus, 1 in 3; Russ. Argentum Nitricum bis Mitigatum, 1 in 3, also Argentum Nitricum Mitigatum, 1 in 2; Fr. Crayons d'Azotate d'Argent Mitigé, containing $\frac{1}{10}$, $\frac{1}{4}$, $\frac{1}{2}$, and $\frac{1}{3}$ of Nitrate of Potassium; U.S. Argenti Nitras Dilutus, 1 in 2; not in Belg.)

TOUGHENED NITRATE OF SILVER OR TOUGHENED CAUSTIC. [NEW.]

Add Nitrate of Potassium, 5, to Nitrate of Silver, 95, before fusion.

Test.—10 grs. will yield with Hydrochloric Acid 8 grs. of precipitate, and the filtrate when evaporated will leave a white residue.

Not Official.

Mild Caustic Points, made by fusing Nitrate of Potassium in various proportions with Nitrate of Silver, are used by oculists and others; thus—

No. 1 consists of 1 Nitrate of Silver and 2 of Nitrate of Potassium. (OFFICIAL.)
2 „ 1 „ 3 „
3 „ 1 „ 3½ „
4 „ 1 „ 4 „

ARGENTI OXIDUM.

OXIDE OF SILVER.

Ag_2O, eq. 232.

An olive-brown powder, insoluble in Water, but soluble in Nitric Acid.

Tests.—When heated to redness, 29 parts leave 27 of pure Silver. It is dissolved by Nitric Acid, and precipitated by Chloride of Sodium;

the supernatant liquor ought not to be discoloured by Sulphide of Ammonium—indicating absence of copper.

Medicinal Properties.

It has the general therapeutic qualities of the Nitrate, without its escharotic effect, and, as it is said, without discolouring the skin. A valuable astringent in hemorrhages.

Dose.—½ to 2 grs. in form of pill.

(U.S.; not in Austr. Belg. Dan. Fr. Ger. or Russ.)

If prescribed with Creasote or with the Chlorides in pills, the Oxide must be first diffused through some inert powder such as Kaolin, or the heat produced in rapidly reducing the Silver or Chlorine combining with it, causes the mass to become red-hot, or to explode.

ARGENTUM PURIFICATUM.

REFINED SILVER.

Test.—If Ammonia be added in excess to a solution of the metal in Nitric Acid, the resulting solution exhibits neither colour nor turbidity. Used only to prepare Nitrate of Silver.

(Fr.; not in the others.)

ARMORACIÆ RADIX.

HORSERADISH ROOT.

The fresh root of the *Cochlearia Armoracia,* (perennial), cultivated in Britain, and most active in the autumn and early spring before the leaves have appeared.

Its virtues are taken up by Water and Alcohol. When distilled with Alcohol, it yields none of the oil. The root may be kept fresh for some time if buried in sand and in a cool place.

Medicinal Properties.

It is highly stimulant, exciting the stomach, and promoting the secretions, especially that of urine. Used in atonic dyspepsia; also as a sudorific in chronic rheumatism. The infusion is used as a gargle for aphonia.

(Belg.; Dan.; Fr. Raifort; not in Austr. Ger. Russ. or U.S.)

Preparations.

SPIRITUS ARMORACIÆ COMPOSITUS. Colourless. [MODIFIED.]

Horseradish Root scraped, 20; dried Orange Peel cut small and bruised, 20; Nutmeg bruised, ½; Proof Spirit, 160; Water, 60; mix, and distil over 160. =(1 in 8).

Sp. g. about 0·920.

The quantity of water has been increased from 40 to 60.

Dose.—1 to 3 drms.

(Not in other Pharmacopœias; Fr. Teinture de Raifort Comp. differs widely from the above.)

Not Official.

INFUSUM COMPOSITUM.—Fresh Root, sliced, 1; Black Mustard Seed, 1; Compound Spirit of Horse-radish, 1; boiling Distilled Water, 20: macerate two hours; strain, and add the spirit.

Dose.—1 to 2 oz. as a warm stimulant. Used also as a gargle for aphonia.

It is found in practice that a temperature of 150° to 180° F. makes the strongest infusion.

Aconite Root has been mistaken for this root, which seems incredible, unless we reflect that country people are in the habit of putting into the ground again Horseradish that has been scraped until only the crown and a remnant of the root vanishing to a point remain, resembling the tap-root of Aconite.

ARNICÆ RHIZOMA.

ARNICA RHIZOME.

The rhizome and rootlets of the *Arnica montana* (perennial), or Leopard's Bane, dried. Collected in the mountainous parts of Central and Southern Europe.

Medicinal Properties.

Stimulant, acting on the brain and the whole nervous system; irritant to the stomach and bowels; peculiarly useful in diseases attended with a debilitated or typhoid state of the system. Used externally for bruises and wounds, and after extraction of teeth to allay pain.

(Austr. and Fr., root, leaves, and flowers; Russ. and U.S., root and flowers; Belg. Dan. and Ger., flowers.)

Preparations.

TINCTURA ARNICÆ. Pale greenish yellow, and having a characteristic odour.

Arnica Rhizome, in No. 40 powder, 1; Rectified Spirit to percolate 20; macerate forty-eight hours with 15 of the spirit, agitating occasionally; pack in a percolator, and when it ceases to drop, pour on the remaining 5 of spirit; afterwards subject the contents of the percolator to pressure, filter and add sufficient Rectified Spirit to make 20. =(1 in 20).

Dose.—½ to 1 drm.

(Belg. Fr. and U.S., 1 and 5, Dan. Ger. and Russ., 1 and 10, all from flowers: Russ., 1 and 5, U.S. 1 in 10, from the root; Austr., 1 and 5, from root, leaves, and flowers, mixed; all are by weight.)

Used externally, it should be mixed with an equal quantity of hot water, and applied with lint.

Symptoms of poisoning by Arnica are violent vomiting, intense headache, diarrhœa, colic, depression of pulse.

ANTIDOTES.—Opium, Morphine.

Not Official.

ARNICA OPODELDOC.—White Soap, 4; Rectified Spirit, 10; Tincture of Arnica, 5; Camphor, 1. Dissolve by heat, and strain.

EXTRACTUM ARNICÆ RADICIS FLUIDUM.—U.S., 1 in 1, made with diluted Alcohol.

Not Official.

ARSENIUM.

As, eq. 75.

A bluish-grey metal, of great brilliancy, quickly tarnishing on exposure. It has a sp. g. of 5·7 to 5·9, and volatilizes at 356° F. (180° C.), its fumes having the odour of garlic.

It is found in most countries, usually combined with other metals.

Its oxide is also a natural production, though chiefly found in the flues of furnaces in which various metallic ores are roasted.

See ACIDUM ARSENIOSUM.

ARSENII IODIDUM.

IODIDE OF ARSENIC.

AsI_3, eq. 456.

[NEW.]

Obtained by direct combination of Iodine and Metallic Arsenium or by evaporating to dryness an aqueous mixture of Arsenious and Hydriodic Acids.

Small orange coloured crystals, which gradually lose Iodine when exposed to the air.

Soluble, 1 in 30 of Water; 1 in 100 of Rectified Spirit.

It is gradually decomposed by boiling Water and by boiling Alcohol.

Its aqueous solution has at first a neutral reaction, but on standing gradually decomposes into Arsenious and Hydriodic Acids.

Heated in a test-tube it almost entirely volatilises, violet vapours of Iodine being set free.

Dose.—$\frac{1}{30}$ of a grain in a pill.

(U.S.; not in Austr. Belg. Dan. Fr. Ger. or Russ.)

Now included in B. P.; has been a "Not Official" in Companion since 1866.

LIQUOR ARSENII ET HYDRARGYRI IODIDI (Donovan's Solution). [NEW.]

Iodide of Arsenium, 45 grs.; Red Iodide of Mercury, 45 grs.; Distilled Water a sufficiency. Triturate the Iodides with about 1½ oz. Water until nearly all is dissolved; pass it through a filter, and wash the latter with sufficient Water to make with the former 10 fl. oz. =(1 grain in 110 minims).

A clear pale liquid with a metallic flavour, sp. g. 1·016.

This solution is rather stronger than the old Donovan's Solution, as it contains about 1 per cent. of each of the Iodides.

Dose.—10 to 30 minims.

ASAFŒTIDA.

ASAFŒTIDA.

The gum-resin exuded from the incised living root of *Ferula Narthex* and of *Ferula Scorodosma*, and probably other species.

Procured in Afghanistan. Imported from Bombay.

It occurs usually in irregular masses, composed of tears agglutinated together by a darker coloured and softer material.

It should yield not more than 10 per cent. of ash. 50 to 60 per cent. should be soluble in Rectified Spirit.

Medicinal Properties.

It is a moderate stimulant, a powerful antispasmodic, an efficient expectorant, and feeble laxative. Useful in cases of flatulency in the bowels, in hysteric paroxysms, and other kinds of nervous affections; also in some forms of chronic bronchitis.

Was recommended by the late Mr. Worms for the Cattle Plague.

Dose.—5 to 20 grs.

(Austr. Belg. Dan. Fr. Ger. Russ. and U.S.)

Contained in Pilula Aloes et Asafœtidæ.

Preparations.

ENEMA ASAFŒTIDÆ.

Asafœtida, 30 grs.; Distilled Water, 4 oz.; rub the Asafœtida with the Water added gradually so as to form an emulsion, for one enema.

(Not in the other Pharmacopœias.)

PILULA ALOES ET ASAFŒTIDÆ, 1 in 4. *See* ALOES.

PILULA ASAFŒTIDÆ COMPOSITA. *Syn.* PIL. GALBANI COMP. Dark brown.

Asafœtida, 2; Galbanum, 2; Myrrh, 2; Treacle by weight, 1; melt together in a water bath, and stir together until the mass assumes a uniform consistence. =(Asaf. and Galb., of each, 1 in 3½).

As this mass becomes very hard and unmanageable, unless warmed when required for use, it is preferable to mix the Asafœtida, Galbanum, and Myrrh all in powder; keep the powder in a stoppered bottle: the treacle can be added when required to form into pills.

Both Asafœtida and Galbanum can be powdered when chilled.

Dose.—5 to 10 grs.

(U.S.—Asafœtida 3, Soap 1; not in Austr. Belg. Dan. Fr. Ger. or Russ.)

SPIRITUS AMMONIÆ FŒTIDUS, 38 grs. in 1 oz. *See* AMMONIA.

TINCTURA ASAFŒTIDÆ. Deep reddish brown.

Asafœtida (small fragments), 1; Rectified Spirit, a sufficiency; macerate seven days in 15 of the spirit in a closed vessel, with occasional agitation, filter, and add spirit to make 8. =(1 in 8).

Dose.—½ to 1 drm.

(Belg. Dan. Fr. Ger. and Russ., 1 and 5; U.S. 1 in 5; all by weight; not in Austr.)

Prescribed with Aromatic Spirit of Ammonia, or with Mucilage, as the resin separates when mixed with Water only. Alone or with Tincture of Valerian and Hyoscyamus, in flatulent hysteria.

ATROPINA.

ATROPINE.

An alkaloid, in colourless acicular crystals, $\mathbf{C_{17}H_{23}NO_3}$, eq. 289, obtained from Belladonna.

Solubility, 1 in 500 of Water; 1 in 3 of Rectified Spirit; 1 in 25 of Ether; 1 in 1 of Chloroform.

Tests.—Its solution in water has an alkaline reaction, powerfully dilates the pupil, and gives a citron-yellow precipitate with Chloride of Gold. Leaves no ash when burnt with free access of air.

Medicinal Properties.

Used extensively in applications and by hypodermic injection for the relief of pain, such as neuralgia or that arising from spasm. In the form of solution of the Sulphate of Atropine it is used for ophthalmic purposes.

(Belg. Dan. Fr. Russ. and U.S.; not in Austr. or Ger.)

Like Belladonna, it dilates the pupil of the eye. The Unguentum Atropinæ is a much cleaner preparation than Unguentum Belladonnæ.

Antidotes.—In case of poisoning by Atropia, the antidotes are the same as for Belladonna.

Preparations.

UNGUENTUM ATROPINÆ. Cream colour. [MODIFIED.]

Atropine, 8 grs.; Rectified Spirit, ½ drm.; Benzoated Lard, 1 oz.: dissolve the Atropine in the spirit, and mix with the lard. =(about 1 in 60).

Benzoated Lard is now ordered in the place of Lard.

About 30 grains of Ointment = ½ grain of Atropine, may be used at one application.

(In no other Pharmacopœia.)

Not Official.

Oleatum Atropinæ.—Atropine, 8 grs.; Oleic Acid, 1 oz.: dissolve with a heat not exceeding that of a water bath.

The same strength as Unguentum Atropinæ.

ATROPINÆ SULPHAS.

SULPHATE OF ATROPINE.

It is crystalline or pulverulent, and nearly colourless.

Solubility, 10 in 4 of Water; 1 in 3 of Rectified Spirit. Insoluble in Ether and Chloroform.

Tests.—It leaves no residue when burned with free access of air. Its solution in water dilates the pupil of the eye, is neutral to test-paper, and should give a white precipitate with Chloride of Barium.

(Austr. Belg. Dan. Fr. Ger. Russ. and U.S.)

Preparations.

LAMELLÆ ATROPINÆ. Discs of Atropine. [NEW.]

Discs of Gelatine, with some Glycerine, each weighing about $\frac{1}{50}$ grain and containing $\frac{1}{5000}$ grain Sulphate of Atropine.

Now included in B. P.; was a "Not Official" in Companion 1864.

Note.—Atropine Paper and Atropine Gelatine, in books proposed by Mr. Streatfield and in bottles of discs by Mr. Ernest Hart, are extensively used by oculists to dilate the pupil of the eye—a small square or disc being introduced between the eye and the lower lid.

LIQUOR ATROPINÆ SULPHATIS. Colourless. [ALTERED.]

Sulphate of Atropine, 9 grs.; Camphor Water, 16½ fl. drs.: dissolve. =(1 in 100).

1 grain in 110 minims.

It is now made with Camphor Water, and is a little stronger.

Dose.—1 to 4 minims = $\frac{1}{110}$ to $\frac{1}{28}$ grain of Sulphate of Atropine.

The same dose may be subcutaneously injected.

Not Official.

Guttæ Atropiæ Sulphatis (*London, London Ophthalmic, and St. Bartholomew's Hospitals*).—Sulphate of Atropine 1 grain; Distilled Water, 1 oz.

Guttæ Atropiæ Sulphatis Fortiores (*London Ophthalmic*).—Sulphate of Atropine, 2 grains; Distilled Water, 1 oz.

Injection of Atropine and Morphine. *See* Morphinæ Acetas.

Solutions of Sulphate of Atropine are more suitable for ophthalmic use than those of Atropine, as the latter requires spirit for its solution.

AURANTII CORTEX.

BITTER-ORANGE PEEL.

The outer part of the rind of the ripe fruit of the *Citrus Vulgaris*, dried.

Medicinal Properties.

It is a mild tonic, carminative and stomachic; a useful addition to bitter Infusions and some Decoctions.

(Austr. Belg. Dan. Fr. Ger. and Russ.; U.S. Aurantii Amari Cortex, also Aurantii Dulcis Cortex.)

Preparations.

INFUSUM AURANTII.

Dried Bitter Orange Peel, cut small, 1; boiling Water, 20: infuse for fifteen minutes and strain. =(1 in 20).

Dose.—1 to 2 oz.

(Not in other Pharmacopœias. Fr. Tisane d'Oranger, Leaves 5, Boiling Water 1000.)

INFUSUM AURANTII COMPOSITUM. [MODIFIED.]

Dried Bitter Orange Peel, cut small, ½ oz.; Fresh Lemon Peel, 112 grs.; Cloves, bruised, 56 grs.; boiling Water, 20 oz.: infuse for fifteen minutes and strain. =(1 in 40).

The Brit. Pharm. gives the relative proportions as 4, 2, 1, 160. These are incorrect. Now as the above quantities are not the same as Brit. Pharm., 1867, it would have been better in altering to have made the grains and parts agree.

The quantities of Lemon Peel and Cloves have been slightly decreased.

Dose.—1 to 2 oz.

(Not in the other Pharmacopœias.)

SYRUPUS AURANTII. Straw-colour, not quite bright. Keeps well.

Tincture of Orange Peel, 1; Syrup, 7: mix. =(1 in 8).

Sp. g. about 1·282.

Dose.—1 to 2 drms.

(Austr. peel, weak spirit, sugar, and tincture; Belg. and Dan. peel, water, and sugar; Fr. peel, spirit, water, and sugar; also Citric Acid, water, and sugar, with Alcoolature d'Orange; Ger. and Russ. peel, wine, and sugar; U.S. sweet peel, spirit, water, and sugar.)

TINCTURA AURANTII. Pale brown, but deepens by age.

Dried Bitter Orange Peel, cut small and bruised, 1; Proof Spirit, 10; macerate for seven days in a closed vessel with occasional agitation, then strain, press, and filter; add sufficient Proof Spirit to make 10. =(1 in 10).

Dose.—1 to 2 drms.

It is much prescribed with Mineral Acids, also with Quinine in tonic mixtures.

(Austr. Belg. Dan. Fr. Ger. Russ. and U.S. 1 and 5; all by weight.)

AURANTII FRUCTUS.

BITTER ORANGE.

The ripe fruit of the *Citrus Vulgaris.*

Preparations.

TINCTURA AURANTII RECENTIS.

The thin yellow and fresh rind of Bitter Orange, 6; macerate for 7 days in 18 of Rectified Spirit, with frequent agitation; strain, press, and filter: finally, if necessary, add Spirit to make 20. = (3 in 10).

Dose.—1 to 2 drms.

(Fr. Alcoolature d'Orange, fresh peel 1, alcohol 2; U.S. Tinct. Aurant. Dulc. fresh peel 1, alcohol 5; not in the other Pharmacopœias.)

VINUM AURANTII. Golden sherry colour.

Wine made in Britain by the fermentation of a saccharine solution to which the fresh peel of the Bitter Orange has been added, containing 10 to 12 per cent. of Alcohol and but slightly acid to test-paper. It is, in fact, the Orange Wine sold in the shops of grocers and others.

Introduced to prepare Quinine Wine, also Vinum Ferri Citratis.

Not Official.

OLEUM AURANTII CORTICIS.

A volatile Oil, extracted by mechanical means from Fresh Orange Peel.

A pale yellowish liquid, with neutral reaction, having the odour of Orange Peel. Sp. g. ·885—·873.

Solubility, 1 in 7 of Rectified Spirit; in all proportions of Absolute Alcohol.

By keeping, the Oil becomes thicker and acquires a disagreeable terebinthinate taste, which may be prevented by mixing it while fresh with 5 per cent. of Alcohol, and decanting the Oil after it has become clear from the sediment.—*U.S.P.*

(Austr.; Belg. sp. g. ·835—·844; Fr.; Russ. sp. g. ·830—·835; U.S. sp. g. about ·860; not in Dan. or Ger.)

AURANTII FLORIS AQUA.

ORANGE-FLOWER WATER.

The distilled water of the flowers of the Bitter Orange tree, *Citrus Vulgaris*, and of the Sweet Orange tree, *Citrus Aurantium;* prepared mostly in France.

The Orange-flower Water of commerce is usually three times the strength of that employed in former years.

Test.—Not coloured by Sulphuretted Hydrogen—indicating absence of Copper and Lead.

Medicinal Properties.

A mild tonic, but chiefly used as a flavouring vehicle.

Dose.—½ to 1 oz.

(Austr. Belg. Dan.; Fr. Eau Distillée de Fleur d'Oranger; Ger. Russ. and U.S.)

Preparation.

SYRUPUS AURANTII FLORIS. Colourless.

Orange-flower Water, 8; Refined Sugar, 48; Distilled Water, 16, or a sufficiency; heat the sugar and water together, strain, and when nearly cold, add the orange-flower water. When finished, should weigh 72 oz. and measure 54 oz. Sp. g. 1·330.

Dose.—1 to 2 drms.

(Belg. O.F.W. 345, Sugar 655; Fr. O.F.W. 10, Sugar 18; Ger. O.F.W. 4, Sugar 6; Russ. O.F.W. 5, Sugar 9; U.S. O.F.W. 35, Sugar 65; all by weight; not in Austr. or Dan.)

Not Official.

OLEUM AURANTII FLORUM.

Syn.—OLEUM NEROLI.

A volatile Oil, distilled from fresh Orange-flowers.

A yellowish or brownish thin liquid, with neutral reaction, having a powerful odour of Orange-flowers.

Solubility, in all proportions of Rectified Spirit or Absolute Alcohol.

If a little Alcohol be poured on the surface of the Oil and the mixture gently undulated, a bright violet fluorescence will be observed.

(Austr.; Belg. sp. g. ·860—·870; Fr.; Ger.; Russ. sp. g. ·850—890; U.S. sp. g. ·850—·890; not in Dan.)

BALSAMUM CANADENSE.

See TEREBINTHINA CANADENSIS.

Not Official.

BALSAMUM DIPTEROCARPI.

GURJUN BALSAM, OR WOOD OIL.

(Pharmacopœia of India.)

Balsamic exudation, obtained from the trunk of *Dipterocarpus Lævis* and other species, by incision and the application of heat. Imported from the East Indies. It is an oleo-resin, constituting a transparent liquid of the consistence of Olive Oil, lighter than Water, of a dark brown sherry colour, slightly fluorescent. Heated in a vial to 270° F. (132·2° C.) it becomes turbid and gelatinous. It affords a turbid solution when shaken with an equal volume of Benzol.

When dissolved in about 20 parts of Carbon Bisulphide and a drop of a cooled mixture of equal parts of Sulphuric and Nitric Acids added it takes a splendid violet colour, which lasts several hours. This reaction is not prevented by the presence of Resin or by Copaiba Balsam. (Fluckiger.)

Medicinal Properties.

Dr. Dougall used 1 part Gurjun Balsam with three parts of Lime Water to anoint the body night and morning, cleaning the body before the morning application, first with dry earth and then with water. He gave 2 drachms of the Balsam internally night and morning, mixed with Lime Water, for Leprosy. *Lancet*, May 16, 1874. Mr. J. D. Hillis, of the Leper Asylum in British Guiana, is greatly in favour of it. *Lancet*, April 24, 1880. It is also applied for Eczema.

BALSAMUM PERUVIANUM.

BALSAM OF PERU.

A Balsam obtained from *Myroxylon Pereiræ*. It exudes from the trunk of the tree after the bark has been beaten, scorched, and removed.

From San Salvador, in Central America.

A reddish-brown or nearly black liquid, translucent in thin films, having a characteristic odour and bitter taste.

Sp. g. between 1·137 and 1·150. This has got lower in recent years, and is ascribed to a modification which the Balsam undergoes in the process of purification.

Soluble 1 in 1 of Rectified Spirit, but when more than 3 of the spirit is added to 1 of Balsam it becomes turbid; in all proportions of Chloroform; insoluble in Olive Oil.

Tests.—It should not diminish in volume when shaken with an equal bulk of water. 10 drops triturated with 6 grs. of Slaked Lime produces a permanently soft mixture; and the mixture on being warmed until all volatile matter is given off and until charring commences gives no fatty odour.

For papers on Tests for the purity of Balsam of Peru, see *Pharm. Journ.*, July, 1881, p. 45; Oct., 1882, p. 321; Sept., 1884, p. 237.

Balsam of Peru contains Cinnamic and Benzoic Acids, both of which possess antiseptic properties.

Medicinal Properties.

A warm and stimulating tonic and expectorant. Useful in chronic catarrh, asthma, and other pectoral complaints, and in rheumatism; also to restrain excessive discharges, as gleets, &c. Externally for chronic indolent ulcers and for sore nipples.

Dose.—10 to 15 minims as an emulsion with mucilage or sugar and yolk of egg with water.

(Austr. sp. g. 1·15; Belg. sp. g. 1·14—1·15; Dan. sp. g. 1·15—1·16; Ger. sp. g. 1·137—1·145; Russ. sp. g. 1·14—1·16; U.S. sp. g. 1·135—1·150.)

Not Official.

UNGUENTUM.—Balsam, 1; Lard, 7.

An excellent application for sore nipples or cracked lips.

UNG. B. PERUV. RESINOSUM.—Balsam, 1; Resin Ointment, 1: mix. Applied upon cotton wool for bedridden sores.

BALSAMUM TOLUTANUM.

BALSAM OF TOLU.

A Balsam obtained from *Myroxylon Toluifera.* It exudes from the trunk of the tree after incisions have been made in the bark.

From Tolu, New Granada.

A soft solid, which becomes harder by keeping, of a yellowish brown colour and aromatic balsamic odour. When pressed between two warmed pieces of glass and then examined with a lens it exhibits an abundance of crystals of Cinnamic Acid.

We found sp. g. of two samples to be 1·23 and 1·258.

The natural constituents of Tolu Balsam are the same as those of Peru Balsam, only they exist in smaller quantity and different proportions, Benzyl Cinnamate forming the majority in the first, Benzyl Benzoate in the second.—*Year Book of Pharmacy*, 1877, p. 101.

Soluble 1 in 1 of Rectified Spirit; 1 in 3 of Benzol; 2 in 1 of Chloroform; 1 in 1 of Glacial Acetic Acid; insoluble in Benzin; nearly insoluble in Bisulphide of Carbon.

Medicinal Properties.

Similar to those of the Balsam of Peru. Lozenges good for cough.

Dose.—10 to 20 grs., in the form of emulsion, with mucilage and sugar.

(Belg. Dan. Fr. Russ. and U.S.; not in Austr. or Ger.)

Contained in Tinctura Benzoini Composita.

Preparations.

SYRUPUS TOLUTANUS. Colourless, slightly opaque. Keeps well.

Balsam of Tolu, 1¼; Sugar, 32; Water, 20; boil the balsam with the water in a lightly covered vessel half an hour, stirring occasionally, and adding water when required; when cold, make up to 16; filter, add the sugar, and dissolve with the aid of a steam or water bath. When finished, weighs 48 and measures 36. Sp. g. 1·330. =(1 in 28⅘).

Dose.—1 to 2 drms., in cough mixtures.

(Belg. Fr. Russ. and U.S.; Dan. made with Tincture; not in Austr. and Ger.)

TINCTURA TOLUTANA. Pale brown. Deepens by age.

Balsam of Tolu, 1; Rectified Spirit, 6: place them in a well-corked bottle, which should then be laid on its side and revolved slowly from time to time until the Balsam is dissolved, filter, and add sufficient Spirit to make up to 8. =(1 in 8).

Dose.—15 to 60 minims, mixed with mucilage or syrup.

(U.S. 1 in 10; Dan. and Fr. 1 and 5; all by weight; not in Austr. Belg. Ger. and Russ.)

BEBERINÆ SULPHAS.

SULPHATE OF BEBERINE.

Prepared from *Nectandra* or *Bebeeru* bark, which grows in British Guiana.

In dark-brown thin translucent scales, yellow when in powder, with a strong bitter taste.

Solubility, 1 in 80 of water; sparingly in Spirit.

It will also dissolve 1 in 1 of water, and the solution can be diluted up to 1 and 8 of water, but on further dilution it precipitates.

Tests.—When burnt with free access of air leaves no residue. Its aqueous solution gives with Caustic Soda a yellowish white precipitate, which is dissolved by agitating the mixture with Ether. The ethereal solution, separated by a pipette and evaporated, leaves a yellow translucent residue entirely soluble in dilute Acids.

Medicinal Properties.

Tonic and antiperiodic, an imperfect substitute for Quinine; also given in menorrhagia.

Dose.—1 to 3 grs. as a tonic; 5 to 10 grs. as an antiperiodic.

(Not in the other Pharmacopœias.)

INCOMPATIBLES.—Alkalies and their Carbonates, Bromide and Iodide of Potassium, Lime Water, Tartaric Acid, and Tartrates, Astringent Infusions and Tinctures.

BELÆ FRUCTUS.

BAEL FRUIT.

The half-ripe fruit, dried, of *Ægle Marmelos*, a tree which grows in most parts of India.

In fragments, with a brownish-orange dried pulp adhering to the rind.

Sir Joseph Fayrer advises the use of fresh Bael Fruit in the form of Bael Sherbet, as used in India.—*Med. Times and Gazette*, Dec. 23, 1877.

Sir Joseph Fayrer had a few of the fresh fruits sent over, very carefully packed; they arrived in excellent condition. A confection was made of these by the Author; it had the aroma and the flavour of the fresh fruits.

Since 1880 a supply of fresh fruits has been regularly received. The spring is the best time for importing the fruits. Dose of the confection.—A teaspoonful.

Medicinal Properties.

Has been much extolled for diarrhœa and dysentery, and is given in combination with Syrup of Red Gum or other astringents.

Preparation.

EXTRACTUM BELÆ LIQUIDUM. Intense brown. [MODIFIED.]

Bael, 1 lb.; Distilled Water, 15 lbs.; Rectified Spirit, 3 oz.: macerate for twelve hours in 5 lbs. of the water, pour off the liquid, repeat the operation twice for one hour. Press, filter through flannel, evaporate to 13 fl. oz., and when cold add the spirit.

A fluid ounce is equal to an ounce of Bael.

NOTE.—There is a mistake in the original text of Brit. Pharm. which has since been corrected. The spirit has been increased from 2 oz. to 3 oz.

Dose.—1 to 2 drms.

(Not in the other Pharmacopœias.)

BELLADONNÆ FOLIA.

BELLADONNA LEAVES (DEADLY NIGHTSHADE).

The fresh leaves and the branches to which they are attached; also the leaves separated from the branches, carefully dried, of *Atropa Belladonna* (perennial); gathered in June, when the fruit has begun to form, from wild or cultivated plants growing in Britain.

Medicinal Properties.

Belladonna causes dryness of the throat, is a powerful narcotic, possesses diaphoretic and diuretic properties, and is exceedingly valuable in convulsions, neuralgia, whooping cough, paralysis, and diseases having their seat chiefly in the nervous system. Dr. Nunnely successfully treated habitual constipation by giving ⅛ to ½ grain of Extract on rising in the morning, which rarely failed to produce a healthy stool after breakfast; and, by continuing its use for a week or fortnight, it restored the natural action of the bowels. For nocturnal incontinence of urine, dose 5 to 10 minims of the Tincture, with the same dose of Tinct. of Perchloride of Iron three times a day. (*Lancet*, Oct. 22, 1870.) In loss of tone and irritable state of the generative organs which gives rise to nocturnal emissions, although it has slightly aphrodisiacal properties. For treatment of typhoid fever, see *Medical Times*, Feb. 5, 1870.

The Extract, given in 1-grain doses, relieves rheumatism. As a prophylactic, 10 grains dissolved in 6 ounces of water; dose a teaspoonful.

For external use the liniment of the root is the cleanest and most effective.

(Belg. and U.S. leaves, fresh and dried; Ger. leaves and branches; Austr. leaves and herb; Fr. leaves and fruit.)

INCOMPATIBLES.—Caustic Alkalies, Opium, Strychnine.

ANTIDOTES.—In cases of poisoning by Belladonna, the antidotes are, an emetic of 10 grs. of Sulphate of Copper; and afterwards Opium should be administered in the proportion required to counteract the effects of the Belladonna. Chloral Hydrat., *Lancet*, Jan. 8, p. 74, and Oct. 1, 1881, p. 589. Pilocarpine, *Brit. Med. Jour.*, April 16, 1881, p. 594. Physostigma, *Brit. Med. Jour.*, June, 1881, p. 918.

Preparations.

EXTRACTUM BELLADONNÆ.

Take 112 lbs. of fresh leaves and young branches, bruise in a stone mortar, or suitable apparatus, and press out the juice, heat it gradually to 130° F. (54·4° C.), separate the green colouring matter by a calico filter, heat the strained liquor to 200° F. (93·3° C.) to coagulate the albumen, and again filter; evaporate the filtrate by a water-bath to the consistence of a thin syrup, then add to it the green colouring matter previously separated and passed through a hair sieve, and, stirring the whole together assiduously, continue the evaporation at a temperature not exceeding 140° F. (60° C.), until the extract is of a suitable consistence for forming pills.

100 lbs. of herb yield 56 lbs. of juice = nearly 4 lbs. extract (viz. 63 oz.).

100 lbs. leaves, when dried, weigh 16 lbs.

An estimation of the alkaloids contained in four samples of Extract of Belladonna, prepared in 1885 by different makers gave ·94 p. c., 1·17 p.c., 1·11 p. c., ·73 p. c. The following samples in good condition were examined at the same time: 1880—1·26 p. c., 1·22 p. c.; 1881—1·16 p. c., 1·21 p. c.; 1884—1·21 p. c.

Dose.—$\frac{1}{4}$ to $\frac{1}{2}$ gr., gradually increased to 1 or 2 grs. 1 gr. given in a pill for rheumatism.

(Belg. clarified juice from leaves evaporated; Dan. made from leaves with weak spirit; Ger. made with water and spirit from leaves and flowering branches; Russ. made from leaves with water and spirit; Fr. clarified juice from leaves evaporated, also alcoholic from the root and from the seeds; U.S. an alcoholic extract from the powder of the leaf, also Abstractum Belladonnæ and a liquid extract of the root; Austr. alcoholic from the dried root.)

SUCCUS BELLADONNÆ.

Freshly expressed juice from the fresh leaves and young branches, 3; Rectified Spirit, 1; mix; after 7 days filter. To be kept in a cool place.

Dose.—5 to 15 mins.

TINCTURA BELLADONNÆ. Intense brown.

The dried leaves in No. 20 powder, 1; Proof Spirit, 20: macerate forty-eight hours in 15 of the spirit, agitating occasionally; pack in a percolator, and when it ceases to drop, add the remaining spirit, let it drain, press the marc; filter and make up with proof spirit to 20.

=(1 in 20).

60 minims may be considered about equal in therapeutical strength to 1 gr. of the extract.

Dose.—From 5 to 20 minims.

(Dried leaves,—Belg. and Fr. 1 and 5; U.S. 15 in 100; Russ. 1 and 10; Dried root,—Austr. 1 and 5; Fresh leaves,—Fr. and Belg. 1 and 1; Fr. also fresh root 1 and 1; all by weight; not in Dan. or Ger.)

BELLADONNÆ RADIX.

BELLADONNA ROOT.

The dried root of *Atropa Belladonna*, from plants growing wild or cultivated in Britain; or imported in a dry state from Germany. The roots are best collected in early spring.

(Austr. Belg. Dan. Fr. Russ. and U.S.; not in Ger.)

Four samples of good dried root were examined and gave ·432, ·430, ·390, ·501, p. c. alkaloid, chiefly Atropine.

From a parcel of roughly collected roots which were dried, the crowns, containing also portions of stem, were separated; also the larger roots (say over an inch in diameter) were separated from the smaller roots (average ½ inch in diameter). These three divisions were separately ground and passed through a No. 60 sieve. On examination for alkaloids the crowns gave ·41 p. c., large roots ·56 p. c., small roots ·50 p. c.

Preparations.

EMPLASTRUM BELLADONNÆ. [ALTERED.]

Alcoholic Extract of Belladonna, 1; Resin Plaster, 1; Soap Plaster, 1: melt the plasters by the aid of a water-bath, then add the Extract, and mix the whole thoroughly together. = (1 in 3).

There is a great alteration in appearance from the Brit. Pharm. 1867 Plaster; it was formerly made of the extract from the leaves. Applied to the breasts after nursing to disperse the milk.

(U.S. (Alcoholic Extr. of Root) 1, Resin Plaster 1; Belg. with Extract, Emp. Picis, and Olive Oil; Ger. 1 in 4, and Russ. 1 in 3·6; Fr. Alcoholic Extract (Seeds) 3 in 4; not in the others.)

EXTRACTUM BELLADONNÆ ALCOHOLICUM. [NEW.]

Belladonna Root, 1 lb.: macerate it with 2 pints of Rectified Spirit in a closed vessel for forty-eight hours, transfer to a percolator, and when the fluid ceases to pass continue the percolation with water until 2 pints of fluid have been collected. Evaporate the percolated liquid by a water-bath until it has acquired a suitable consistence.

NOTE.—By this method the last portions of spirit are mixed with water.

Dose.—$\frac{1}{16}$ to $\frac{1}{4}$ grain.

(Foreign Pharmacopœias compared under Extractum.)

LINIMENTUM BELLADONNÆ. Light reddish-brown. [ALTERED.]

Belladonna Root in No. 40 powder, 20; Camphor, 1; Rectified Spirit, a sufficiency: moisten the root for three days with 20 of the spirit, then pack in a percolator, and when the liquor ceases to pass continue the percolation with sufficient spirit to produce, with the camphor, 30. (3 of Liniment are equal to 2 of Root.)

28 lbs. of Belladonna Root was macerated and percolated as by Brit. Pharm. 1864 formula, the receiver was then removed and the percolation continued as by 1885 formula. The two products were then examined separately for alkaloids, and gave ·452 per cent. in the first percolate, ·092 per cent. in the second percolate. These results show that the Liniment 1885 is weaker than that of 1864 (introduced by Peter Squire), and would not therefore be improved by further dilution, as has been recommended by some writers.

Prescribed with equal parts of Soap Liniment or Compound Camphor Liniment. An excellent topical application for neuralgic pain. When an oily liniment is required, the Chloroform of Belladonna mixes best, as it readily dissolves in the oil.

(U.S. 1 in 1; not in Austr. Belg. Dan. Fr. Ger. or Russ.)

UNGUENTUM BELLADONNÆ. [ALTERED.]

Alcoholic Extract of Belladonna, 50 grs.; Benzoated Lard, 1 oz.: mix.

The proportions are wrongly given in the Brit. Pharm. as 1 part and 9 parts. This ointment was formerly made with Extract of Belladonna and Lard.

(Belg. and U.S. 1 in 10; Russ. 1 in 11; all with extract; not in Austr. Dan. Fr. or Ger.)

ATROPINA. *See* ATROPINA.

Not Official.

CHLOROFORMUM BELLADONNÆ.—Powdered root, 20: percolate with sufficient Chloroform to produce 20.

Applied with equal parts of camphor liniment or olive oil, for painful rheumatism: one of either of these will make a bright liniment with 3 of Eau de Cologne.

It should not be applied to the nape of the neck.

LINIMENTUM BELLADONNÆ COMP.—Liniment. Belladonnæ, 7; Chloroformi Belladonnæ, 1; mix. Sprinkled on impermeable piline (not *spongio piline*), when applied to the loins in lumbago, should be firmly pressed with the hands on the part for five minutes to insure perfect contact, and should then be kept on at least 10 or 12 hours.

The author, who suffered much from lumbago, found this more effectual and much more convenient than Belladonna plasters.

SUPPOSITORIUM.—Extract of Belladonna, 1 gr.; Stearine, 13 grs.: mix, and form into a cone for one suppository.

(U.S. ½ gr. Alcoholic Extract of Belladonna in each suppository.)

BENZOINUM.

BENZOIN.

The Balsamic resin exuded from incisions made in the bark of the *Styrax Benzoin*, a native of Sumatra, Java, Borneo, Laos, and Siam, and probably from one or more other species of *Styrax*.

There are several qualities of Benzoin in the market; two, however, are chiefly used in medicine, one agglutinated tears, the other a compact mass consisting of a rich brown resin with more or less of tears in it. Imported from Siam and Sumatra, that from Siam being the purer and having the stronger odour. Yields by sublimation 15 to 20 per cent. of Benzoic Acid.

Solubility: the tears wholly soluble 1 in 5 of Rectified Spirit; 1 in 1 of Ether; and in Solution of Potash. The mass contains impurities, which are left after treating it with Alcohol. The Solution in Spirit or Ether is acid.

Medicinal Properties.

Stimulant, expectorant, styptic, used in making aromatic pastilles.

Dose.—10 to 30 grs., rarely given in powder.

(Austr. Belg. Dan. Fr. Ger. Russ. and U.S.)

Preparations.

ACIDUM BENZOICUM. *See* ACIDUM BENZOICUM.

ADEPS BENZOATUS, 10 grs. to 1 oz. *See* ADEPS.

UNGUENTUM CETACEI 1 in 54. *See* CETACEUM.

TINCTURA BENZOINI COMPOSITA. Intense reddish-brown. FRIAR'S BALSAM. TRAUMATIC BALSAM.

Benzoin, 8; prepared Storax, 6; Balsam of Tolu, 2; Socotrine Aloes, 1½ (less $\frac{1}{40}$th);* Rectified Spirit, 80: macerate seven days, with occasional agitation, filter, and add sufficient spirit to make up 80. =(1 in 10).

Dose.—½ to 1 drm., triturated with mucilage or yolk of egg.

(Belg.; Dan.; U.S.; Fr. Teinture Balsamique; not in Austr. Ger. or Russ.)

Medicinal Properties.

Internally given for chronic cough.

Applied externally to languid ulcers, cuts, or wounds.

Not Official.

TINCTURA BENZOINI.—Benzoin, 1; Rectified Spirit, 10: dissolve and strain.

(Austr. Belg. Dan. Fr. Ger. and Russ. 1 and 5; U.S. 1 in 5; all by weight.)

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* To be exact, 16 grains are to be taken from every 1½ oz. of Aloes.

Lotio Benzoini.—A nice lotion to protect the face from the heat of the sun is made with Tincture of Benzoin, 1; Rose Water, 40.

Not Official.

BETULA ALBA.

COMMON EUROPEAN BIRCH.

Oleum.—Gives the odour to Russia leather; has been used for chronic eczema.

BISMUTHUM.

BISMUTH.

Bi, eq. 209.

In its crude state is generally impure.

BISMUTHUM PURIFICATUM.

The Pharmacopœia gives a process for the purification of Bismuth by fusion with Cyanide of Potassium and Sulphur, and subsequently with the dried Carbonates of Potassium and Sodium.

A crystalline metal of a greyish-white colour, with a distinct roseate tinge.

Sp. g. 9·83; fuses at 507° F. (264° C.)

Tests.—Dissolved in a mixture of equal volumes of Nitric Acid and Distilled Water, it forms a solution which, by evaporation, yields colourless crystals that are decomposed on the addition of water, giving a white precipitate. If the mother-liquor from which the crystals have been separated be evaporated with Hydrochloric Acid until all the Nitric Acid is dissipated, a little of the product yields no evidence of Arsenium on being examined by the Hydrogen test, commonly known as Marsh's Test; no blue coloration on adding Water and excess of Ammonia (Copper), and no precipitate on filtering and saturating the ammoniacal filtrate with Nitric Acid (Silver); no white precipitate with Diluted Sulphuric Acid (Lead); no red or black precipitate with Sulphite of Sodium (Tellurium and Selenium); and no blue precipitate with Ferrocyanide of Potassium (Iron).

Employed for the preparations of Bismuth.

(Belg. and Fr.)

BISMUTHI CARBONAS.

CARBONATE OF BISMUTH.

$(Bi_2O_2CO_3)_2, H_2O$, eq. 1042.

A white powder, prepared by dissolving Purified Bismuth in Nitric Acid, and precipitating with Carbonate of Ammonium.

Soluble with effervescence in Nitric Acid; insoluble in Water.

Tests.—If to Nitric Acid, mixed with half its volume of Distilled Water, as much Carbonate of Bismuth be added as the Acid will dissolve, one volume of this solution poured into 20 volumes of water will yield a white precipitate; when added to Sulphuric Acid, coloured with Sulphate of Indigo, the colour of the latter is not discharged, unless a relatively very minute proportion of the Indigo solution be used (indicating absence of Nitrates); the Nitric Acid Solution gives no precipitate or becomes only slightly turbid with Solution of Nitrate of Silver (indicating absence of Chlorides). It should also stand the tests described under "Purified Bismuth."

Medicinal Properties.

Similar to the Subnitrate, and often preferred to it.

Dose.—5 to 20 grs.

(U.S.; not in the other Pharmacopœias.)

The following prescription is a good one for pyrosis:—

Bismuthi Carbonatis, 2 drms.; Magnes. Carb. levis, 1 drm.; Pulv. Tragac. ver., 20 grs.; Aq. Flor. Aurant., Syr. ejusdem, ãã 2 drms.; Aquæ ad 6 oz.

Dose.—3 to 4 teaspoonfuls 3 times a day after meals.

Should this be made of double strength it will solidify.

If Acacia Gum be used instead of Tragacanth, it will settle as a hard mass in the bottle.

The Light Carbonate of Magnesium is added to prevent its setting hard.

BISMUTHI CITRAS.

CITRATE OF BISMUTH.

$BiC_6H_5O_7$, eq. 398.

[NEW.]

Heat Subnitrate of Bismuth 5½, with Nitric Acid 11, or a sufficiency, until the Salt is dissolved; add Distilled Water, with constant stirring until the cloudiness produced by the Water no longer rapidly disappears; to the clear or only faintly opalescent solution of Bismuth add, until no further precipitate is produced, a solution of Citrate of Sodium (prepared from Bicarbonate of Sodium 8, Citric Acid 4, dissolved in Water and boiled until all the Carbonic Acid Gas is expelled. Heat the whole to boiling, occasionally stirring. Set the whole aside to cool. When cold, filter and wash the precipitate of Citrate of Bismuth until no free Nitric Acid remains. Dry the product over a water-bath.

A white powder, usually containing 2½ per cent. of absorbed moisture.

Tests.—It dissolves in solution of Ammonia, forming a clear or nearly clear liquid, which gives with Sulphuretted Hydrogen a black precipitate (Sulphide of Bismuth), and the filtrate from this, after it has been boiled until free of Ammonia, and then filtered, gives a white precipitate (Citrate of Calcium) when warmed with Lime Water; the filtrate also affords no black colour round a crystal of Sulphate of Iron added together with an equal bulk of Sulphuric Acid (Nitrate). On strongly heating Citrate of Bismuth it chars, and on ignition yields a residue for the most part black but with a yellow surface; soluble in a little Nitric Acid. The latter solution on being dropped into Water affords a white precipitate; and the solution should also stand the tests described under "Purified Bismuth." 10 grs. dissolved in solution of Ammonia and treated with Sulphuretted Hydrogen in excess yields a precipitate which, when well washed and dried, weighs about 7 grs.

(U.S.; not in the other Pharmacopœias.)

Medicinal Properties.

Similar to the Subnitrate.

Dose.—2 to 5 grs.

Preparations.

LIQUOR BISMUTHI ET AMMONII CITRATIS. [ALTERED.]

Rub Citrate of Bismuth, 800 grs., to a paste with a little Distilled Water; add solution of Ammonia gradually and with stirring until the Salt is just dissolved; dilute with Distilled Water to measure 20 oz.

A colourless solution, neutral or alkaline to test-paper, which is miscible with Water.

Tests.—Sp. g. 1·07. Two fluid drachms mixed with an ounce of Distilled Water and treated with Sulphuretted Hydrogen in excess yields a black precipitate which, when washed and dried, weighs about 7 grs. Evaporated to dryness and the residue ignited, a charred mass with a yellow edge results; this treated with Nitric Acid affords a solution which should stand the tests described under "Purified Bismuth."

One fluid drachm contains an amount of Bismuth equivalent to about 3 grs. of Oxide of Bismuth.

Dose.—30 to 60 minims.

BISMUTHI ET AMMONII CITRAS. [NEW.]

Evaporate the solution of Citrate of Bismuth and Ammonium over a water-bath to the consistence of a syrup; spread the resulting fluid in thin layers on glass or porcelain plates and dry at a temperature not exceeding 100° F. (37·8° C.). Remove the scales and preserve them in a stoppered bottle. Small shining translucent scales, which yield Ammonia when warmed with solution of a fixed alkali.

Solubility, 1 in 1 of Water; sparingly in Rectified Spirit.

Tests.—10 grs. dissolved in Water and treated with Sulphuretted Hydrogen in excess yields a precipitate which, when washed and dried, weighs about 6½ grs. On ignition it should stand the tests given under "Citrate of Bismuth."

These scales, when convenient, can be used for making the Liquor (1 in 10). Dissolve 1 oz of the scales in 8 oz of Distilled Water with a few drops of Solution of Ammonia to clear it and make up with Distilled Water to 10 oz.

(U.S.; not in the other Pharmacopœias.)

Dose.—2 to 5 grs.

Not Official.

BISMUTHI NITRAS.

In colourless transparent crystals. Decomposed by water. Soluble in Glycerine, but is slowly deposited from the solution when water is added. 10 grs. dissolved *cold* in an ounce of Glycerine have been used in skin diseases. — *Medical Times*, December 9, 1876.

It forms with Sulphuric Acid diluted with an equal bulk of water a solution which is blackened by Sulphate of Iron, showing the presence of a Nitrate.

BISMUTHI SUBNITRAS.

SUBNITRATE OF BISMUTH.

Syn. OXYNITRATE OF BISMUTH, WHITE BISMUTH, MAGISTERY OF BISMUTH.

$BiONO_3, H_2O$, eq. 305.

NOTE.—David Howard writes, if the compound $BiONO_3, H_2O$ exists, it is so unstable that it could certainly not be kept without decomposition.

A heavy white powder in minute crystalline scales.

Insoluble in water. Soluble without effervescence in Nitric Acid mixed with half a volume of Distilled Water.

Mix Nitric Acid 4 oz., with Distilled Water 3 oz., and add Purified Bismuth 2 oz., in small pieces and in successive portions. When effervescence has ceased apply for ten minutes a temperature approaching that of ebullition, and decant the solution from any insoluble matter that may be present. Evaporate the solution until it is reduced to 2 oz., and pour it into half a gallon of Distilled Water. When the precipitate which has formed has subsided, decant the supernatant liquid, add half a gallon of Distilled Water to the precipitate, stir them well together, and after two hours decant off the liquid, collect the precipitate on a calico filter, enfold it with the calico and press it with the hands, and dry it at a temperature not exceeding 150° F. (65·5° C.)

Tests.—It forms with Sulphuric Acid diluted with an equal bulk of Water a solution which is blackened by Sulphate of Iron (Nitrate). The Nitric Acid solution gives only a faint opalescence with a very small proportion of Hydrochloric Acid (Silver), with solution of Nitrate of Silver remains clear or becomes only slightly turbid (absence or trace of Chlorides), and stands the tests for impurities described under "Purified Bismuth." If 10 grs. be dissolved in Nitric Acid, and the fluid be mixed with a solution of about 20 grs. of Citric Acid and sufficient Ammonia to give decided alkalinity, the mixture then being boiled while still kept faintly alkaline, no precipitate or opalescence is observable (Calcium Phosphate).

Medicinal Properties.

It is highly useful in pyrosis, some forms of vomiting and irritative dyspepsia; also in diarrhœa; like Iron it blackens the excretions. When the powder is prescribed in mixture, it should be suspended in Mucilage of Tragacanth. *See* BISMUTHI CARBONAS.

Externally it is used as a cosmetic, but is more or less blackened by an impure atmosphere; and in lotion for some chronic skin diseases.

Dose.—5 to 20 grs. in pill at meals.

(Belg. Subnitras Bismuthi; Dan. Subnitras Bismuthicus; Fr. Azotate (sous) de Bismuth; Austr. and Ger. Bismuthum Sub-nitricum; Russ. Bismuthum Nitricum præcipitatum; U.S. Bismuthi Subnitras.)

INCOMPATIBLES.—Potash, Soda, Ammonia, and their Carbonates.

Preparations.

TROCHISCI BISMUTHI. White.

Lozenges prepared with Subnitrate of Bismuth, Carbonate of Magnesium, precipitated Carbonate of Calcium, Sugar, Gum Acacia, and Rose Water.

Each lozenge contains 2 grains of Subnitrate of Bismuth.

Dose.—1 to 6 lozenges.

(Fr. Tablettes, 1½ gr. in each; not in the others.)

Not Official.

Unguentum.—Subnitrate of Bismuth, 1; Simple Ointment, 4.

Lotio Bismuthi.—Subnitrate of Bismuth, 10 grs.; Water, 1 oz.: mix. Used as a sedative lotion in cases of eczema.—*Skin Hospital.*

Ferrier's Snuff.—Hydrochlorate of Morphia, 2 grs.; Acacia powder, 2 drms.; Trisnitrate of Bismuth, 6 drms.—*Lancet*, April 8, 1876.

It is described as a speedy and efficacious remedy for a recent cold in the head; each time the nostrils are cleared another pinch should be taken, using it frequently at first. One quarter to one half of this formula may be used in the twenty-four hours.

Glass insufflators are made to blow it up the nostrils.

BISMUTHI OXIDUM.

OXIDE OF BISMUTH.

Bi_2O_3, eq. 466.

Mix Subnitrate of Bismuth 16 with Solution of Soda 80, and boil for five minutes; then, having allowed the mixture to cool and the oxide to subside, decant the supernatant liquid, wash the precipitate thoroughly with distilled water, and finally dry the oxide by the heat of a water bath.

A dull lemon-yellow powder.

It is insoluble in water, but soluble in nitric acid mixed with half its volume of water, and if it be thus dissolved to saturation, the solution mixed with ten or twenty times its volume of water yields a white precipitate.

Tests.—The nitric acid solution gives no precipitate or becomes only slightly turbid with solution of nitrate of silver—indicating absence or only a trace of chlorides; it stands the tests for impurities described under "Purified Bismuth." Heated to incipient redness it is not diminished in weight (absence of moisture and Carbonic Acid).

Dose.—5 to 15 grains.

(Not in the other Pharmacopœias).

Not Official.

BOLDO.

The leaves and young twigs of the *Peumus fragrans*, a native of Chili; has been used in liver complaints, and as a stimulant to digestion, also as a hypnotic.

The activity is due to an alkaloid (?) *Boldine*, and a volatile oil which exists in the leaves in the proportion of 2 per cent.

(Fr.; not in the other Pharmacopœias.)

TINCTURA. Leaves, 1; Proof Spirit, 8.

Digest seven days and filter.

Dose.—10 to 30 mins.

(Fr. 1 and 5; not in the other Pharmacopœias.)

BORAX.

BORAX.

Syn. SODÆ BIBORAS; PYROBORATE OF SODIUM.

$Na_2B_4O_7.10H_2O$, eq. 382.

A salt imported in a crude state from India; large quantities are also manufactured from the native Boric Acid of Tuscany, and the native Borate of Calcium of Peru.

In transparent colourless crystals, sometimes slightly effloresced.

Solubility, 1 in 22 of Water; 2 in 1 of boiling Water; 2 ounces of Borax are dissolved by 2 ounces of Glycerine, and the solution measures only 3¼ ounces. By the aid of 1 of Glycerine, 1 part of Borax will dissolve in 12 of Water. Insoluble in Rectified Spirit. Mucilage when mixed with Borax solidifies.

Tests.—191 grains dissolved in 10 fluid ounces of distilled water require for saturation 1000 grain-measures of the volumetric solution of Oxalic Acid. Borax is an alkaline salt, and this quantity of Oxalic Acid is required to render it neutral. A hot saturated solution, when acidulated with any of the Mineral Acids, lets fall as it cools a scaly crystalline deposit (Boric Acid), a solution of which in spirit burns with a green flame.

Medicinal Properties.

Refrigerant and diuretic. Causes contraction of the uterus; and is combined with ergot and cinnamon water to produce expulsion of the placenta. Used as an emmenagogue. Externally in skin diseases. A saturated solution is applied with great success in pityriasis versicolor; it acts by dissolving the epidermis, and so removing the parasite.

Dose.—5 to 30 grains.

(Austr. Belg. Dan. Fr. Ger. Russ. and U.S.)

INCOMPATIBLES.—Mineral Acids and most of their salts. Mucilage of Acacia.

Preparations.

GLYCERINUM BORACIS. Colourless. Keeps well. [ALTERED.]

Borax in powder, 1; Glycerine, 4; Distilled Water, 2; rub together and heat in a water bath until the Borax is dissolved.

(By weight 1 in 8, measure 1 in 6¾).

It is more dilute than formerly, the water being an addition.

This is not merely a solution of Borax in Glycerine; the Glycerine splits up the biborate into free Boric Acid and a more basic borate with secondary reactions. It reddens Litmus paper, and effervesces on the addition of Bicarbonate of Sodium.

Dose.—½ to 1½ drms.

(Not in the other Pharmacopœias.)

MEL BORACIS. [ALTERED.]

Finely powdered Borax, 2; Glycerine (by weight), 1; Clarified Honey, 16: mix. =(about 1 in 7).

Glycerine has been introduced into this as was proposed in Companion.

(Not in the other Pharmacopœias.)

Applied to aphthæ of the mouth.

Not Official.

GARGARISMA.—Borax, 50 grs.; Honey, 2 fl. drms.; Water, to 5 oz.—*Consumption Hospital.*

Lotio.—Borax, 1; Rose Water, 24; or 1 Borax, 1 Glycerine, 16 Rose Water.
Used as a cosmetic.

Tinctura Myrrhæ et Boracis.—Myrrh, 1; Eau de Cologne, 16; Borax, 1; Water, 3; Syrup, 3.
For the teeth and gums.

Unguentum.—Borax, 1; Simple Ointment, 8.
For chilblains or cracked nipples.

BROMUM.

BROMINE.

Br, eq. 80.

A liquid non-metallic element, obtained from sea-water and from some saline springs.

A dark brownish-red, very volatile liquid, which gives off red suffocating vapours at the ordinary temperature of the air. Sp. g. 2·97 to 3·14; boils at 135° to 145° F. (57·2° to 62·8° C.)

Solubility in water, 1 in 30 by weight.

Test.—Agitated with solution of Soda in such proportion that the fluid remains very slightly alkaline it forms a colourless liquid which, if coloured by the further addition of a small quantity of the Bromine, does not become blue on the subsequent addition of a cold solution of Starch (absence of Iodine).

Used to prepare Acidum Hydrobromicum Dilutum, Potassii Bromidum, and Sodii Bromidum.

Medicinal Properties.

Applied to cancer in the womb by means of lint dipped in the following mixture:—Bromine, 12 minims; Rectified Spirit, 1 drachm; using, at the same time, an injection, as follows:—Bromine, 12 minims; Rectified Spirit, 2 drachms; Water, 16 oz. Mix.

(Belg. Dan. Fr. Ger. Russ. and U.S.; not in Austr.)

Acidum Hydrobromicum Dilutum, *see* p. 15.

BUCHU FOLIA.

BUCHU LEAVES.

Syn.—Diosma.

The dried leaves of *Barosma betulina*, *B. crenulata*, *B. serratifolia*, imported from the Cape of Good Hope.

Water and Alcohol extract their virtues, which probably depend on volatile oil and extractive.

Medicinal Properties.

Tonic, stomachic, diuretic, and diaphoretic. Given chiefly in complaints of the urinary organs, attended with excess of uric acid, for morbid irritation of the bladder and urethra, diseases of the prostate, and retention or incontinence of urine. Also in dyspepsia, chronic rheumatism, cutaneous affections, and dropsy.

Dose.—20 to 40 grs. in powder.

(Belg. Dan. Fr. and U.S.; not in Austr. Ger. or Russ.)

Preparations.

INFUSUM BUCHU.

Buchu leaves bruised, 1; boiling Distilled Water, 20: infuse for half an hour and strain. =(1 in 20).

Dose.—1 to 4 oz.

(Not in the other Pharmacopœias.)

TINCTURA BUCHU. Deep greenish-brown.

Buchu leaves in No. 20 powder, 1; Proof Spirit, 8: macerate for forty-eight hours with ¾ of the spirit, with occasional agitation, pack in a percolator, and let it drain, then pour on the rest of the spirit; when it ceases to drop, press the marc, filter, and make up with Proof Spirit to 8. =(1 in 8.)

Dose.—1 to 4 drms.

(Fr. 1 and 5; not in the other Pharmacopœias.)

BUTYL-CHLORAL HYDRAS.

HYDRATE OF BUTYL-CHLORAL.

Syn. CROTON-CHLORAL HYDRATE, wrongly so called.

$C_4H_5Cl_3O, H_2O$. eq. 193·5.

[NEW.]

Butyl-Chloral, produced by the action of dry Chlorine Gas on Aldehyd cooled to 14° F. (—10° C.); separated by fractional distillation, and converted into the solid Hydrous Butyl-Chloral by the addition of Water.

White crystalline scales.

Solubility, 1 in 44 of Water; 1 in 1 of Glycerine (very slowly); 5 in 3 of Rectified Spirit; 1 in 20 of Olive Oil; nearly insoluble in Chloroform.

Tests.—Fuses about 172° F. (77·8° C.) to a transparent liquid, which on cooling commences to solidify at about 160° F. (71·1° C.) It does not yield Chloroform when heated with solutions of Potash or Soda or with Milk of Lime. The aqueous solution is neutral or but slightly acid to Litmus paper.

(Not in the other Pharmacopœias.)

Now included in B. P.; was a Not Official in Companion 1874.

Medicinal Properties.

Is an efficient remedy in pure neuralgia of the face and head, but is useless when the pain arises from decayed teeth. It relieves dyspnœa of spasmodic asthma and irritative cough of phthisis or of chronic laryngitis.

Dose.—1 to 2 grs. every hour or two hours, but may be increased to 5 or even 10 grs. if the patient bears it well.

Not Official.

MISTURA.—Butyl-Chloral Hydrate, 4 grs.; Glycerine, 15 mins.; Chloroform Water, ½ oz.; Water to 1 oz.—*London Hospital.*

PILULA.—Butyl-Chloral Hydrate, 4 grs.; Compound Powder of Tragacanth, 1 gr.; Water, q. s. in one pill.—*London Hospital.*

Not Official.

BYNE. MALT.

Preparation.

EXTRACTUM BYNES. *Syn.* EXTRACTUM MALTI. MALT EXTRACT.

Is made by infusing or mashing ground Malt in water at a temperature under 160° F., preferably 140° F., filtering and evaporating the solution in vacuo to the consistence of a thick syrup. It is a more convenient preparation for use when it is evaporated only to a thin syrup, but the Extract is more liable to undergo fermentation under these circumstances.

Authorities differ as to the power of the diastase in Malt Extract to convert Starch.

The *Medical Times and Gazette*, June 21, 1884, reported upon the Malt Extracts exhibited at the Health Exhibition, 1884. The results obtained with the Starch test show what Malt Extract will do with a given process; an inderterminate quantity of the sticky Extract is carefully weighed and dissolved so as to equal exactly 5 per cent.; every 20 c. c., therefore, is equivalent to 1 gramme; a 1 per cent. decoction of potato Starch is made by boiling 10 grammes of the Starch to as perfect a solution as possible, and after cooling making it up to a litre. 100 c. c. of the Starch solution and 20 c. c. of the Extract solution are then placed in an incubator, set at 98·8° F., in separate beakers for a quarter of an hour, and when they are brought to that temperature the solutions are mixed and allowed to react; at the expiration of every minute a drop is spotted on to a white plate and tested with Iodine. The blue colour will disappear within ten minutes if the Extract is very active. An Extract that tested in this way gives a blue colour at the end of twenty-five minutes is, as far as diastasic power goes, useless. Four samples were examined with the following results:—

A. One of Extract converted one of potato Starch in 10 minutes.
B. ,, ,, ,, ,, ,, ,, 13 ,,
C. ,, ,, ,, ,, ,, ,, 15 ,,
D. ,, ,, ,, ,, ,, ,, 20 ,,

We have for obvious reasons given the samples anonymously.

We may say that these results very fairly accord with what we have found ourselves when examining from time to time Malt Extracts of different manufacturers.

The U.S. P. orders the Malt to be macerated in cold Water for six hours, then digested for an hour at 131° F., strained and evaporated at a temperature not exceeding 131° F. to the consistence of Honey.

Medicinal Properties.

Malt Extract is prescribed in wasting diseases, and where the digestion is weak. It is also used to emulsify or dissolve Cod Liver Oil.

Dose.—A teaspoonful to a tablespoonful.

German Pharmacopœia gave a process for Extractum Malti in 1872, but it was omitted in the 1882 edition.

Not Official.

CADMII IODIDUM.

In white flat micaceous crystals.

Solubility, 1 in 1½ of Water; 1 in 2 of Rectified Spirit; 1 in 2 of Glycerine.

(Was Official in Brit. Pharm., 1867, but now omitted; not in the others.)

UNGUENTUM.—Iodide of Cadmium, 1; Simple Ointment, 7: mix.

Not Official.

CADMII SULPHAS.

Colourless prismatic crystals.

Solubility, 4 in 5 of Water; insoluble in Rectified Spirit.

(Belg. Fr. and Russ.; not in Austr. Dan. or U.S.)

CAFFEINA.

CAFFEINE.

Syn. THEINA; GUARANINA.

$C_8H_{10}N_4O_2, H_2O$, eq. 212.

[NEW.]

An alkaloid, usually obtained from the dried leaves of *Camellia Thea*, or the dried seeds of *Coffea Arabica*, by evaporating aqueous infusions from which astringent and colouring matters have been removed.

It has also been obtained from Guarana and Paraguay tea.

It crystallizes from its aqueous solution, with one molecule of water, in fine white silky needles, which have a slightly bitter taste.

Solubility, 1 in 80 of Water; 1 in 40 of Rectified Spirit; 1 in 7 of Chloroform; 1 in 400 of Ether; 1 in 160 of Absolute Alcohol.

Tests.—Its aqueous solution is neutral to Litmus. Treated with a crystal of Chlorate of Potassium and a few drops of Hydrochloric Acid, and the mixture evaporated to dryness in a porcelain dish, a reddish residue results, which becomes purple when moistened with Ammonia.

Now included in B. P.; was a Not Official in Companion 1882.

(Austr. Belg. Fr. Ger. Russ. and U.S.; not in Dan.)

Medicinal Properties.

Given in 1 gr. doses every hour for sick headache. Is a valuable heart tonic in 2 or 3 gr. doses three or four times a day (a French physician gave as much as 2 grammes in the course of one day). Its action differs from Digitalis in that it is much more rapid and entirely free from cumulative action. It should not be taken towards night for fear of causing sleeplessness.—*Lancet*, Jan. 24, 1885, Jan. 31, 1885, Feb. 14, 1885.

Mr. Leeds, a dental surgeon in New York, has used a solution of 1 scruple of Caffeine in 2 oz. of a mixture of Alcohol and water (dissolved by a gentle heat) with better results when operating upon very sensitive teeth than even with Cocaine.

Dose.—1 to 5 grains in solution or in pill.

Preparation.

CAFFEINÆ CITRAS. [NEW.]

Dissolve Citric Acid 1, in Distilled Water 2, and stir Caffeine 1, into the heated solution; evaporate to dryness on a water bath, constantly stirring towards the end of the operation. Reduce to fine powder.

A white inodorous powder with an acid reaction on Litmus.

Soluble 1 in 10 of a mixture of 2 parts Chloroform and 1 part Rectified Spirit. With a little water it forms a clear syrupy solution, which on dilution yields a white precipitate of Caffeine that redissolves when 10 parts of water have been added (12 parts required at 60° F.); 1 in 12 of Rectified Spirit.

Dose.—2 to 10 grs.

(Not in the other Pharmacopœias.)

CAFFEINE CITRATE, the existence of which has been disputed, is (*New Remedies*, February, 1881), a semi crystalline granular powder, which is decomposed by cold water and other solvents which dissolve Citric Acid readily and Caffeine sparingly. It is practically insoluble in cold Chloroform, although Chloroform will extract any free Caffeine that may be present.

CAJUPUTI OLEUM.

OIL OF CAJUPUT.

The Oil distilled from the leaves of *Melaleuca minor*.

Imported from Batavia and Singapore.

Very mobile, transparent, of a fine pale bluish-green colour. It has a strong, agreeable odour, and a warm, aromatic taste, and leaves a sensation of coldness in the mouth.

Soluble in all proportions of Rectified Spirit.

Sp. g. about ·926; very little variation in the several samples examined.

Dropped on water, it speedily evaporates. It burns rapidly, without leaving any residue. Copper has been found in it.

On shaking 5 c. c. of the Oil with 5 c. c. of Water containing a drop of diluted Hydrochloric Acid, the Oil loses its green tint and becomes nearly colourless.—*U.S. P.*

(Belg. (Essentia) Dan. Fr. Ger. Russ. and U.S.; not in Austr.)

Medicinal Properties.

A powerful topical and general stimulant, antispasmodic, and diaphoretic. Efficacious in dropsy, chronic rheumatism, hysteria, flatulent colic, and other spasmodic and nervous affections, and in low states of the system. Externally, diluted with Olive Oil (1 to 2), used to allay chronic rheumatism and gout pains. Applied with lint for toothache.

Dose.—1 to 3 minims on a lump of Sugar, or in any bland fluid.

Contained in Linimentum Crotonis.

Preparation.

SPIRITUS CAJUPUTI. Colourless.

Oil of Cajuput, 1; Rectified Spirit, 49; dissolve. =(1 in 50).

Dose.—50 to 100 minims.

(Not in the other Pharmacopœias.)

CALAMINA PRÆPARATA.

Syn. LAPIS CALAMINARIS PRÆPARATA.

[NEW.]

Native Carbonate of Zinc, calcined in a covered earthenware crucible at a moderate temperature, powdered and freed from gritty particles by elutriation.

A pale pinkish-brown powder, without grittiness.

Almost entirely soluble in acids, with effervescence.

Now included in B. P.; was a "Not Official" in Companion 1867.

(Not in the other Pharmacopœias.)

Medicinal Properties.

Mildly astringent, used in face lotions and dusting powders.

Preparation.

UNGUENTUM CALAMINÆ. [NEW.]

Prepared Calamine, 1; Benzoated Lard, 5: mix. =(1 in 5).

This was Official in London and Edinburgh and earlier Dublin Pharmacopœias; it was also called Turner's Cerate.

Not Official.

CALCIUM.

CALCIUM.

Ca, eq. 40.

Calcium, a brilliant white combustible metal, was discovered by Sir Humphrey Davy in 1808. Sp. .g 1·5. It is the metallic base of Lime.

CALCII CARBONAS. *See* CRETA PRÆPARATA.

CALCII CARBONAS PRÆCIPITATA.

PRECIPITATED CARBONATE OF CALCIUM.

Syn. PRECIPITATED CARBONATE OF LIME.

$CaCO_3$, eq. 100.

A white crystalline powder. Insoluble in water.

Chloride of Calcium, 5; Carbonate of Sodium, 13: dissolve each in 40 of boiling Distilled Water, mix; wash the precipitate with boiling Distilled Water thoroughly, and dry at 212° F. (100° C.).

Test.—With Diluted Nitric Acid it effervesces and gives a clear solution, which, if perfectly neutral, and deprived of Carbonic Acid by boiling, is not precipitated by Saccharated Solution of Lime added in excess, or by the solution of Nitrate of Silver—indicating the absence of Phosphates and Chlorides.

(Austr. Belg. Fr. Ger. Russ. and U.S.; not in Dan.)

Medicinal Properties.

Antacid and astringent.

Dose.—10 to 60 grs., in powder or mixture.

CALCII CHLORIDUM.

CHLORIDE OF CALCIUM.

$CaCl_2,2H_2O$, eq. 147.

It may be formed by neutralizing Hydrochloric Acid with Carbonate of Calcium, adding a little solution of Chlorinated Lime and Slaked Lime to the solution, filtering, and evaporating till it becomes solid, and finally drying the salt at about 400° F. (204·4° C.).

In white agglutinated masses, dry, but very deliquescent.

Solubility: 1 in 1 of Water; 1 in 3 of Rectified Spirit.

Tests.—Evolves no Chlorine or Hypochlorous Acid on the addition of Hydrochloric Acid (absence of Hypochlorite). The aqueous solution is not precipitated by the addition of Lime Water (absence of Carbonic Acid).

Dose.—3 to 10 grs.

(U.S.; Austr., Calcium Chloratum Fusum; Belg. Chloruretum Calcii; Fr. Chlorure de Calcium; Russ., Calcium Chloratum Siccum.; not in Dan. or Ger.)

Preparation.

LIQUOR CALCII CHLORIDI. [NEW.]

Chloride of Calcium, 1; Distilled Water, 5. Dissolve and filter if necessary.

Sp. gr. 1·145.

Now included in B. P.; was a "Not Official" in Companion 1866.

Dose.—15 to 50 minims.

Medicinal Properties.

Given to arrest sickness when other remedies fail; also given in glandular diseases.

CALCII HYDRAS.

HYDRATE OF CALCIUM. SLAKED LIME.

$Ca(HO)_2$, eq. 74.

A white powder, strongly alkaline and caustic.

Lime recently burned, 32; Distilled Water, 20: slake the Lime, sift the powder, and keep in a well-closed vessel. Should be recently prepared.

Solubility: sparingly soluble in Water (1 in 900); the solution, on exposure, soon acquires a film of Carbonate of Calcium.

Test.—Should not effervesce on the addition of an acid.

Medicinal Properties.

The Solution (Lime Water) is used in diarrhœa connected with acidity, and in some cases of dyspepsia; also in some calculous affections, and given to children for rickets. Given to correct chronic vomiting, and vomiting of pregnancy.

Incompatibles.—Vegetable and Mineral Acids, Alkaline and Metallic Salts, Tartar Emetic.

Preparations.

LINIMENTUM CALCIS. A thickish cream.

Solution of Lime, 1; Olive Oil, 1: mix. =(1 in 2).

(Belg. Solution of Lime and Almond Oil equal parts; Fr. Linim. Calcaire, Solution of Lime and Almond Oil equal parts; Russ. Solution of Lime and Linseed Oil equal parts; U.S. Solution of Lime and Cotton-seed Oil equal parts; not in Austr. Dan. and Ger.)

Use.—The best liniment to apply to burns and scalds.

LIQUOR CALCIS. Solution of Lime, or Lime Water. Colourless. [MODIFIED.]

Slaked Lime, 1; Distilled Water, a sufficiency: wash the Slaked Lime with some of the Water till the washings cease to give any precipitate with Nitrate of Silver acidified with Nitric Acid; then add it to 80 of the Water and shake well for two or three minutes; after twelve hours decant into a well-stoppered green-glass bottle.

NOTE.—Washing the Lime is an improvement, to get rid of any Chloride of Calcium or alkalies that may be present.

Test.—10 ounces require for neutralization at least 180 grain-measures of volumetric solution of Oxalic Acid, which corresponds to about 5 grains of Lime CaO.

Bottles containing lime water should be kept full, and well closed from the air.

Each ounce contains about ½ gr. of lime.

Dose.—½ to 2 oz. as an antacid. *Brit. Ph. Dose.*—1 to 4 oz.

(U.S.; Austr. and Belg. Aqua Calcis; Fr. Eau de Chaux; Ger. Aqua Calcariæ; Russ. Calcaria Caustica Soluta; Dan. Sol. Hydratis Calcici.)

Water becomes saturated with much less lime than ordered, therefore Liquor Calcis is of the same strength in all the Pharmacopœias.

Used for making Lotio Hydrargyri Flava et Nigra.

LIQUOR CALCIS SACCHARATUS. Colourless, but becomes more or less brown by keeping.

Slaked Lime, 1; Refined Sugar in powder, 2; Distilled Water, 20: digest for some hours, with occasional agitation, and finally separate the clear solution with a syphon, avoiding unnecessary exposure to air. It should be kept in well-closed vessels. =(about 1 in 65).

1 oz. = about 16 oz. Lime Water.

Test.—Sp. g. 1·052. 1 fluid ounce (460·2 grains by weight) requires for neutralization 254 grain-measures of volumetric solution of Oxalic Acid, which corresponds to 7·11 grains of Lime, **CaO**.

Dose.—15 to 60 minims in milk.

Not Official.

LINIMENT FOR FRECKLES.—Liniment of Lime, 8; Solution of Ammonia, 1: mix.

CALCII HYPOPHOSPHIS.

HYPOPHOSPHITE OF CALCIUM.

Syn. HYPOPHOSPHITE OF LIME.

$Ca(PH_2O_2)_2$, eq. 170.

Obtained by heating phosphorus and nearly twice its weight of hydrate of Calcium with water until phosphuretted hydrogen gas ceases to be evolved, then filtering the liquid, separating uncombined lime with carbonic acid gas, and evaporating the remaining solution until the salt separates in a crystalline condition. This is sometimes improved by recrystallisation.

A white crystalline salt, with a pearly lustre.

Solubility: 1 in 8 of water; it is not more soluble in boiling water. Insoluble in spirit.

Tests.—The aqueous solution yields, with Oxalate of Ammonium, a white precipitate of Oxalate of Calcium, insoluble in Acetic Acid, but soluble in Hydrochloric Acid, and with Perchloride of Mercury a white precipitate of Mercurous Chloride changing to grey, owing to the reducing action of the Hypophosphite. 5 grs. boiled for ten minutes with a solution of 12 grs. of Permanganate of Potassium yields on filtration a nearly colourless solution. Heated to redness it ignites, and leaves a reddish-coloured residue amounting to about 80 per cent. of the salt.

Medicinal Properties.

Given in cases of nervous and general debility and pulmonary consumption.

Dose.—5 to 10 grs. in water.

(Belg. Hypophosphis Calcii; Fr. Hypophosphite de Chaux; Russ. Calcaria Hypophosphorosa; U.S.; not in Austr. Dan. or Ger.)

Not Official.

Syr. Calcis Hypophosphitis.—Hypophosphite of Lime, 3; Water, 30; Sugar, 36.
Dose.—A fluid drachm, containing 3 grains.

CALCII PHOSPHAS.

PHOSPHATE OF CALCIUM.

$Ca_3(PO_4)_2$, eq. 310.

A light white amorphous powder, prepared by dissolving Bone Ash in Hydrochloric Acid and precipitating with Ammonia.

Insoluble in water.

Tests.—Of the recently dried powder, 10 grains dissolve perfectly, and without effervescence, in Diluted Hydrochloric Acid (indicating absence of Carbonate and Silica); and the solution yields with Ammonia a white precipitate, which is insoluble in boiling Solution of Potash, and when washed and dried weighs nearly 10 grains.

Medicinal Properties.

For rickets and mollities ossium; said to be useful in scrofulous affections, and to promote union of bone fractures.

Dose.—10 to 20 grs.

(Austr. and Ger. Calcium Phosphoricum; Belg. Phosphas Calcicus; Fr. Phosphate de Chaux; Russ. Calcaria Phosphorica; U.S. Calcii Phosphas Præcipitatus; not in Dan.)

Contained in Pulvis Antimonialis,—2 parts in 3.

CALCII SULPHAS.

SULPHATE OF CALCIUM.

Syn. Sulphate of Lime.

[NEW.]

Native Sulphate of Calcium (**$CaSo_4$, $2H_2O$**, eq. 182) rendered nearly anhydrous by heat.

Introduced for the preparation of Calx Sulphurata.

CALX.

LIME.

An alkaline earth, Oxide of Calcium, **CaO**, eq. 56, with some impurities, obtained by calcining Chalk or Limestone so as to expel Carbonic Acid gas. In hard flaky masses, which, when well sprinkled with water, should crack, swell up, evolve much heat, and crumble to powder.

Solubility.—At 32° F. twenty oz. of water dissolve 13·25 grs.
60° ditto 11·2
212° ditto 6·7

Test.—If previously slaked, it dissolves without effervescence in Diluted Hydrochloric Acid, and if this solution be evaporated to dryness, and the residue redissolved in water, only a very scanty precipitate forms on the addition of Saccharated Solution of Lime—indicating absence of Phosphate of Calcium.

(In all the Pharmacopœias.)

Preparation.

CALCII HYDRAS. See p. 92.

CALX CHLORINATA.

CHLORINATED LIME.

A product obtained by exposing Slaked Lime to the action of Chlorine Gas as long as the latter is absorbed; it may be regarded as consisting chiefly of a compound of Hypochlorite and Chloride of Calcium ($CaCl_2O_2, CaCl_2$), or as a direct compound of Chlorine and Lime ($CaOCl_2$.)

A dull white powder which becomes moist and gradually decomposes on exposure to the air, with a feeble odour of Chlorine.

It should be preserved in well-closed vessels, in a cool and dry place.

Partially soluble in Water and in Rectified Spirit.

Test.—When fresh, 5 grains mixed with 15 grains of Iodide of Potassium, and dissolved in 4 fluid ounces of water, produce, when acidulated with 1 fluid drachm of Hydrochloric Acid, a reddish solution which requires for the discharge of its colour at least 467 grain-measures of the volumetric solution of Hyposulphite of Sodium, corresponding to 33 per cent. of available Chlorine.

In this test, the Hydrochloric Acid, acting on the Hypochlorite of Calcium, liberates Chlorine, and this reacting on the Iodide of Potassium, sets free an equivalent quantity of Iodine, which, if the Chlorinated Lime be good, will require the quantity stated of solution of Hyposulphite of Sodium to convert it into colourless Iodide of Sodium and Tetrathionate of Sodium.

(Dan. and U.S. Calx Chlorata; Austr. Calcium Hypochlorosum; Belg. Hypochloris Calcii; Fr. Chlorure de Chaux. Sec.; Ger. Calcaria Chlorata; Russ. Calcaria Hypochlorosa.)

Preparations.

LIQUOR CALCIS CHLORINATÆ. Colourless.

Chlorinated Lime, 1; Distilled Water, 10; triturate and shake well together for three hours in a bottle and strain. =(1 in 10).

Test.—Sp. g. 1·055. 80 grains by weight mixed with 20 grains of Iodide of Potassium dissolved in 4 ounces of water, when acidulated with 2 drachms of Hydrochloric Acid, gives a red solution, which requires for discharge of its colour not less than 450 grain-measures of the volumetric solution of Hyposulphite of Sodium, corresponding to about 2 per cent. of available Chlorine. (Explanation of Test given under CALX CHLORINATA.)

When made with the best Chlorinated Lime and is quite fresh, it may yield about 3 per cent. of available Chlorine.

(Belg. Hypochloris Calcii Liquidus; Fr. Solute Hypochlorite de chaux; Russ. Calcaria Hypochlorosa Soluta: not in the others.)

Medicinal Properties.

Not much employed internally; externally as a lotion to foul ulcers, burns, chilblains, and cutaneous eruptions, especially the itch. A powerful disinfecting and bleaching agent. A remedy for snake-bites, injected into the wound; also suggested for rabies.—*Lancet*, Feb. 24, 1883, p. 335.

Dose.—20 to 40 minims in a wineglassful of water.

ANTIDOTES.—In case of poisoning by Chlorinated Lime the antidotes are, Emetics, White of Egg, Milk, Flour; not Acids.

VAPOR CHLORI.

Chlorinated Lime, 2 oz.; cold Water, sufficient to moisten it: the vapour to be inhaled from a suitable apparatus.

CALX SULPHURATA.

SULPHURATED LIME.

Syn. SULPHIDE OF CALCIUM.

[NEW.]

A nearly white powder containing not less than 50 per cent. of Sulphide of Calcium, **CaS.**, eq. 72.

Sulphate of Calcium, 7; Wood Charcoal, 1; both in fine powder.

Mix thoroughly; heat to redness in an earthen crucible until the black colour has disappeared. Cool, and at once place the whitish residue in a stoppered bottle.

Test.—If 8 grs. be added to a cold solution of 14 grs. of Sulphate of Copper in an ounce of Water, a little Hydrochloric Acid added, and the mixture then well stirred and heated to a temperature approaching that of ebullition until all action has ceased, the filtered liquid should give no red colour with Ferrocyanide of Potassium (presence of at least 50 per cent. real Sulphide of Calcium).

Medicinal Properties.

Useful for boils and skin affections; has also been used as a depilatory.

Dose.—$\frac{1}{10}$ to 1 gr., given in pill, coated.

(Austr. Belg. Russ. and U.S.; not in Dan. Fr. or Ger.)

Not Official.

CALENDULA.

COMMON MARIGOLD.

Has lately been revived, and the Tincture (4 oz. of the florets to the pint of Proof Spirit) employed.

As an antispasmodic, sudorific, and emmenagogue; also in low fevers.

Dose.—1 to 2 drms.

CALUMBÆ RADIX.

CALUMBA ROOT.

The root of the perennial herb, *Jateorhiza Calumba*, sliced transversely and dried; from the forests of Eastern Africa between Ibo and the Zambesi. It is easily reduced to powder, which has a greenish tinge; it becomes browner with age, and deepens in colour when it is moistened.

Tests.—Moistened with a solution of Iodine, it becomes bluish-black —indicating presence of Starch. A decoction is not blackened by the persalts of Iron—indicating absence of astringent matter.

Medicinal Properties.

A bitter stomachic and tonic, useful in debility of the digestive organs, and to allay nausea attendant on pregnancy. Given in convalescence from acute diseases, combined with Alkalies or Bismuth. It is one of the few bitters that can be prescribed with Salts of Iron.

Dose.—Of the powder 5 to 20 grs. three or four times a day.

Frequently given with powdered Ginger and Rhubarb.

(In all the Pharmacopœias.)

Preparations.

EXTRACTUM CALUMBÆ. [ALTERED.]

Calumba Root, cut small, 1; Proof Spirit, 5: macerate in half the Proof Spirit for twelve hours, strain and press; macerate again with the remaining spirit, strain and press; mix and filter the liquors, recover the spirit by distillation, and evaporate the residue by the heat of a water bath to a pill consistence.

16 parts of Root yield 1 part of Extract.

This preparation is now made with Proof Spirit; as pointed out in previous editions, the extract made with Spirit keeps well, but the aqueous extract becomes mouldy by keeping.

Dose.—2 to 10 grs.

(Austr. made with 70 p. c. Alcohol; Belg. and Fr. made with 60 p. c. Alcohol; Russ. with 38 p. c. Spirit; U.S. fluid extract only, made with Dilute Alcohol; not in Dan. or Ger.)

INFUSUM CALUMBÆ. [MODIFIED.]

Calumba Root, cut small, 1; cold Distilled Water, 20: macerate for half an hour and strain. =(1 in 20).

Calumba root contains starch and mucilage, both of which are dissolved by hot water; cold water dissolves the mucilage only.

Dose.—1 to 2 oz.

(U.S. allows both cold and hot water, about 1 in 32; not in the others.)

Physicians prescribing for patients who wish to take with them a supply of their medicines containing Infusion of Calumba will find 2 drachms of Tincture to be of about the same therapeutical strength as 1 oz. of the Infusion.

TINCTURA CALUMBÆ. Reddish-brown.

Calumba Root, cut small, 1; Proof Spirit, 8: macerate forty-eight hours with 6 of the spirit, agitating occasionally; pack in a percolator, and let it drain, then pour on the remaining spirit; when it ceases to drop, press, and add sufficient proof spirit to make up 8. =(1 in 8).

Dose.—½ to 2 drms. for an adult; 5 minims for a child.

(Belg. Fr. and Russ. 1 and 5; U.S. about 1 in 10; all by weight; not in others.)

CAMBOGIA.

GAMBOGE.

A Gum Resin, obtained from *Garcinia Hanburii.*

It is imported from Siam, and consists of about 75 per cent. of Resin and 15 of Gum.

About three-fourths is soluble in Rectified Spirit, the solution is rendered of an opaque yellow by water; three-fourths also soluble in Ether; entirely soluble in Ammoniated Alcohol, which is not rendered turbid by the addition of water.

It forms a yellow emulsion when rubbed with water.

Test.—An emulsion made with boiling water, and cooled, does not become green on addition of Solution of Iodine—indicating absence of flour or starch.

Medicinal Properties.

It is employed in the treatment of dropsy, attended with torpidity of the bowels, generally in combination with Elaterium, Bitartrate of Potassium, or Jalap. Also in cases of obstinate constipation, and has frequently been found effectual in the expulsion of the tape-worm. As it is apt to occasion much sickness and griping, it is best given in small doses, repeated at short intervals, until it operates.

It may be given in pill or emulsion, or dissolved in an alkaline solution; the last method has been recommended in dropsical complaints.

Stimulates the intestinal glands, but not the liver.—Dr. Rutherford.

Dose.—1 to 5 grs. In cases of tænia, may be increased to 10 or 15 grs.

(U.S. Cambogia; Belg. Gummi Guttæ; Fr. Gomme-Gutte; Ger. Gutti; Dan. and Russ. Gummi-Resina Gutti; not in Austr.)

Preparation.

PILULA CAMBOGIÆ COMPOSITA. Intense brown.

Gamboge, 1; Barbadoes Aloes, 1; Compound Powder of Cinnamon, 1; Hard Soap, 2; Syrup, a sufficiency: mix. =(1 in 6 nearly).

Dose.—5 to 10 grs.

(Fr. and Belg. (Pilule Anderson) Aloes, Gamboge, Oil of Anise, and Honey; Fr. has also Pilules de Bontius, containing Ammoniacum and Vinegar instead of Cinnamon and Soap; U.S. Pil. Catharticæ Comp. contains Gamboge about 1 in 14; not in the others.)

CAMPHORA.

CAMPHOR.

A Stearoptene, obtained from the wood of *Cinnamomum Camphora*, imported in a crude state from China and Japan, and purified in this country by sublimation.

Usually in bell-shaped masses or in tablets.

The Borneo Camphor from the Dryobalanops, though virtually the same as the official, is valued very much more by the Chinese.

Solubility, 1 in 900 of Water; 1 in 1¼ of Rectified Spirit; or by weight, 1 in 1; 4 in 1 of Chloroform; 12 in 7 of Ether; 1 in 4 of Olive Oil (slowly); 1 in 1½ of Oil of Turpentine; 2 in 1 of Glacial Acetic Acid; insoluble in Alkalies. 3 of Camphor rubbed with 1 of Carbolic Acid crystals become a clear solution. 3 of Camphor and 3 of Hydrate of Chloral rubbed together liquefy. Carbonic Acid, Bicarbonate of Magnesium, and Myrrh increase its solubility in water. Milk is a solvent and a good vehicle to administer it in.

Its sp. g. varies from ·986 to ·996. It evaporates entirely if left exposed to the air. It melts at 347° F. (175° C.), boils at 401° F. (205° C.), and in close vessels sublimes unchanged.

(In all the Pharmacopœias.)

Medicinal Properties.

Stimulant at first, afterwards sedative; antispasmodic, and diaphoretic.

In moderate doses, it produces (in health) mental exhilaration, increases the heat of the skin, and occasions diaphoresis. Given in repeated doses relieves strangury and distension of the bladder. It allays nervous irritation, and produces a general placidity of feeling. It is useful in cholera and diarrhœa, and in large doses it causes giddiness and disposition to sleep. It is an antaphrodisiac, and given in chordee. Camphor Spirit mixed with warm water to bathe the nostrils is highly useful in hay fever, and relieves irritation of the nostrils in common cold; has been injected subcutaneously as an hypnotic.

Camphor Water is a good vehicle for giving Carbonate of Ammonium, and if the proportions are nicely balanced, makes a pleasant draught; thus, Carbonate of Ammonium 5 grs., Camphor Water $\frac{1}{2}$ oz., water 1 oz.

Dose.—1 to 10 grs.

Symptoms of poisoning by Camphor: convulsions, lividity of countenance, stupor, arrest of urinary secretions.

ANTIDOTES.—Stomach pump or emetics, stimulants freely, and warmth to the extremities.

Contained in Linimentum Aconiti, Lin. Belladonnæ, and other Liniments and Ointments.

Preparations.

AQUA CAMPHORÆ. *Syn.* MISTURA CAMPHORÆ.

Camphor, crushed, $\frac{1}{2}$ oz.; Distilled Water, 1 gallon = 160 oz.: macerate at least two days, confining the camphor under the water in a muslin bag attached to a glass rod.

Dose.—1 to 2 oz = about $\frac{1}{4}$ or $\frac{1}{2}$ gr. of Camphor.

(Dan. Mistura Camphorata, contains Camphor, Mucilage of Acacia, Syr. Rheados, and Elderflower Water; Fr. Eau Camphrée; U.S. dissolve Camphor in Alcohol and absorb with Cotton Wool, let Alcohol evaporate and pour on Distilled Water; not in the others.)

LINIMENTUM CAMPHORÆ. Pale straw.

Camphor, 1; Olive Oil, 4: dissolve. =(about 1 in 5).

(Austr. (Oleum Camphoratum), 1 and 3; Dan., 1 and 4; Belg. Fr. Ger. and Russ., 1 and 9; U.S. Camphor 1, Cotton-seed Oil 4; all by weight.)

LINIMENTUM CAMPHORÆ COMPOSITUM. Colourless.

Camphor, 5; English Oil of Lavender, $\frac{1}{4}$; Strong Solution of Ammonia, 10; Rectified Spirit, 30: dissolve the oil and camphor in the spirit, then add the ammonia gradually, shaking them together until a clear solution is formed. =(about 1 in 8).

Stimulating. Most useful in tic-douloureux and chronic rheumatism. Painful neuralgia has been relieved by applying lint previously soaked in the liniment and covered with a dry napkin until redness is produced, and then lightly rubbing the part with the Solution of Bimeconate of Morphia until relieved.

LINIMENTUM AMMONIATO-CAMPHORATUM.

Belg. Liquid Ammonia, 1; Camphorated Oil, 9.
Dan. Solution of Ammonia, 1; Camphorated Oil, 1; Olive Oil, 2.

Ger. Water of Ammonia, 1; Camphorated Oil, 3; Poppy Oil, 1.
Russ. Solution of Ammonia, 2; Camphorated Oil, 3; Olive Oil, 3.
(Not in the other Pharmacopœias.)

SPIRITUS CAMPHORÆ. Colourless.

Camphor, 1; Rectified Spirit, 9: dissolve. =(1 in 10).

Test.—Sp. g. about 0·850.

Dose.—10 to 30 minims in Milk or on Sugar.

(Austr. Belg. Dan. Fr. (Teinture de Camphré Conc.) Ger. and U.S., 1 in 10; Russ., 1 in 13; all by weight.)

TINCTURA CAMPHORÆ COMPOSITA. Light brown.

Opium, in powder, 40 grs.; Benzoic Acid, 40 grs.; Camphor, 30 grs.; Oil of Anise, ½ drm.; Proof Spirit, 20 oz.: macerate seven days, filter, and add sufficient Proof Spirit to measure 20 oz. =(1 grain of opium in 240 minims).

Known as Paregoric Elixir. 1 fluid drm. contains ¼ gr. Powder of Opium = ⅛ gr. of Extract of Opium.

Given with equal proportions of Tinct. of Squill to allay spasmodic cough in bronchitis and in phthisis.

Dose.—15 to 60 minims, or for a child 2 to 5 mins.

Belg. Elixirium Paregoricum.—Opium, 5; Benzoic Acid, 5; Camphor, 3·5; Oil of Anise, 2·5; Alcohol, 80 p. c. 1000.
Dan. Tinctura Thebaiaca Benzoica.—Opium, 6; Benzoic Acid, 6; Camphor, 4; Oil of Anise, 3; Diluted Alcohol, 1200.
Fr. Elixir Paregorique.—Extract of Opium, 3; Benzoic Acid, 3; Camphor, 2; Oil of Anise, 3; Alcohol, 60 p. c. 650.
Ger. Tinctura Opii Benzoica.—Opium, 1; Benzoic Acid, 4; Camphor, 2; Oil of Anise, 1; Diluted Alcohol, 192.
Russ. Tinctura Opii Benzoica.—Opium, 1; Benzoic Acid, 4; Camphor, 2; Oil of Anise, 2; Alcohol 70 p. c. 192.
U.S. Tinctura Opii Camphorata.—Opium, 4; Benzoic Acid, 4; Camphor, 4; Oil of Anise, 4; Glycerine, 40; Diluted Alcohol to 1000.
All by weight.

Not Official.

Camphor Balls.—Camphor, 2; White Wax, 5; Spermaceti, 3; Oil of Almonds, 3; Tincture of Tolu, ¼: melt, and pour into half-ounce gallipots.

Camphora cum Cretâ.—Camphor, 1; Prepared Chalk, 8: powder the camphor by rubbing it with a few drops of rectified spirit, mix in the chalk, and pass the whole through a sieve. A dentifrice.

Ceratum Camphoræ.—Camphor, 2; White Wax, 3; Lard, 4; Oil of Almonds, 3; melt together and stir till cold.

Essentia Camphoræ.—Camphor, 1; Rectified Spirit, 20:—or Camphor, 1; Rectified Spirit, 18, Tincture of Myrrh, 2. In domestic use for making Julep. Given for diarrhœa, 5 minims every 10 or 15 minutes in water till diarrhœa is arrested.

Spiritus Camphoræ Fortior.—A saturated solution, in Rectified Spirit.

Camphorated Vinegar.—Camphor, 1; Alcohol, 60; Vinegar, 180: mix.

Unguentum Camphoræ, Belg.—Camphor, 25; White Wax, 8; Lard, 67.

Ceratum Camphoræ, U.S.—Camphor Liniment, 3; Olive Oil, 12; Cerate, 85.

Ceratum Camphoræ, Russ.—Camphor, 2; Yellow Wax, 1; Lard, 6.

Not Official.

CAMPHORA MONOBROMATA.

MONOBROMATED CAMPHOR.

$C_{10}H_{15}BrO$, eq. 231.

Colourless prismatic needles or scales, with a camphoraceous odour and taste.

Almost insoluble in Water; soluble 1 in 12 of Rectified Spirit; 10 in 7 of Chloroform; 1 in 2 of Ether: 1 in 8 of Olive Oil; sparingly in Glycerine.

Tests.—It melts at 149° F. (65° C.), and may be sublimed at a slightly higher temperature. If boiled with test-solution of Nitrate of Silver it is decomposed and yields Bromide of Silver. It is soluble without decomposition in cold concentrated Sulphuric Acid, and will again separate unaltered if the solution be poured into water.

(Fr. Russ. and U.S.; not in Austr. Belg. Dan. or Ger.)

Medicinal Properties.

Given in hysteria, spermatorrhœa, delirium tremens, and convulsions of teething; but its use requires caution.

Dose.—2 to 5 grains can be prescribed in pills with a mixture of Glucose and Treacle (equal parts), or can be dissolved in Almond or Olive Oil and mixed with mucilage and water.

It has been stated to be an antidote to Strychnine.

CANELLÆ CORTEX.

CANELLA BARK.

The Bark of *Canella alba*, deprived of its corky layer and dried. Imported from the West Indies.

Contained in Vinum Rhei.

CANNABIS INDICA.

INDIAN HEMP.

The flowering or fruiting tops of the female plants of *Cannabis sativa*, from which the resin has not been removed, dried. Cultivated in India.

It is known in India as Gunjah or Ganga.

We are indebted to Dr. O'Shaughnessy for the first introduction of Indian Hemp into this country. He brought over a quantity from India, which the Author converted into extract for him, and distributed amongst a large number of the profession under Dr. O'Shaughnessy's directions.

Medicinal Properties.

Has been given in tetanus, and might be tried in large doses for hydrophobia.

Dr. Clendinning used it largely, and his opinion is as follows:—"It acts as a soporific or hypnotic in conciliating sleep; as an anodyne in lulling irritation; as an antispasmodic in checking cough and cramp; as a nervine stimulant in removing languor and anxiety, and raising the pulse and spirits without any drawback or deduction on account of indirect or incidental inconveniences, producing tranquil sleep without causing constipation, nausea, or other effect or sign of indigestion, without headache or stupor." Coffee and cocoa aid the action.

More recently, Dr. Russell Reynolds has found it very successful in certain cases of insomnia, neuralgia, and spasm. He says it relieves these derangements of the nervous system, without interfering with any one of the functions of organic life, and does not produce the after feeling of misery which follows many opiates.

Most valuable in allaying all disturbance of the spinal cord, and is given in hay fever.

Not prescribed in powder.

(Austr. Belg. Ger. Russ. and U.S.; Fr. has only "Hachisch" prepared from the leaves.)

Antidotes.—In case of over-dose, hot brandy-and-water may be given, vegetable acids, such as lemon juice, vinegar, and the like, and the patient be allowed to sleep. A blister to the nape of the neck is recommended to control its violent action.

Preparations.

EXTRACTUM CANNABIS INDICÆ. Most intense green.

Indian Hemp, in coarse powder, 1; Rectified Spirit, 5: macerate seven days, press out the tincture, distil off the spirit, and evaporate to a soft extract.

(Austr. Belg. Ger. Russ. and U.S.: not in others.)

Soluble in Olive Oil. 6 of Indian Hemp yield 1 of Alcoholic Extract.

Dose.—½ to 1 grain in pill.

In delirium tremens, 2 grains given every hour for four times gave relief. *Med. Record*, p. 192. May, 1881.

Extract of Indian Hemp varies considerably in strength, consequently the dose should always be small to commence with; toxic symptoms have been produced with 1 grain.

TINCTURA CANNABIS INDICÆ. Intense green.

Extract of Indian Hemp, 1; Rectified Spirit, 20: dissolve. =(1 in 20).

22 minims contain 1 gr. of extract.

Dose.—5 to 20 minims with 1 drm. of mucilage, adding 1 oz. of water.

In prescribing the Tincture it should be previously triturated with the mucilage, or the resin will be precipitated by the water.

(Same as Belg. and Ger.; Russ. 1 and 10; U.S. from Herb 1 in 5; not in others.)

Incompatibles.—Waters and Watery Infusions.

CANTHARIS.

CANTHARIDES.

The beetle, *Cantharis vesicatoria*, dried; collected in Spain, France, Russia, Sicily, and Hungary. Contains a crystalline principle, called Cantharidine.

Free from mites.

The powder should be dry and kept closely corked, for if at all damp it is apt to acquire a putrid odour. A lump of camphor kept in it prevents mites.

Medicinal Properties.

Externally its effects are rubefacient and irritant; by continued application it is vesicant. For the latter purpose the Charta or Liquor Epispasticus is used, and is especially effective in inflammation of deep-seated parts, as in pleuritis, pericarditis, pneumonia, etc. It acts for a longer period, and is less irritating to the patient, than Ammoniacal or Acetic Acid embrocations. Internally as tincture in chronic affections of the nervous system, paraplegia, etc. It has a diuretic effect, and is given in gleet or other mucous discharges; but it should be given cautiously, for it sometimes produces strangury.

It is used as an application to ringworm. It is the basis of most of the applications used to increase the growth of hair.

In chronic inflammation of the bladder it should *not* be used as a counter-irritant, from its irritating effects on the urinary organs when absorbed by the skin. A solution of Nitrate of Silver (½ drm. to 1 oz. of water) is to be preferred.

(In all the Pharmacopœias.)

Antidotes.—In case of poisoning by Cantharides use Emetics or stomach pump, followed by Castor Oil and Opium. Emollient Drinks.

Preparations.

ACETUM CANTHARIDIS. Intense brown. [MODIFIED.]

Cantharides, bruised, 2; Glacial Acetic Acid, 2; Acetic Acid, a sufficiency: add the glacial acetic acid to 13 of acetic acid, and in this mixture digest the cantharides for two hours at a temperature of 200° F. (93·3° C.; when cold place them in a percolator, and when the liquid ceases to drop, pour over the residuum 5 of acetic acid, and when the percolation is finished, press, filter, and make the whole liquid up to 20 with Acetic Acid. =(1 in 10).

Sp. g. about 1·060.

Cantharides is now ordered "bruised" instead of "in fine powder."

(Not in the other Pharmacopœias.)

CHARTA EPISPASTICA. Blistering Paper. White.

White Wax, 4; Spermaceti, 1½; Olive Oil, 2; Resin, ¾; Canada Balsam, ¼; Cantharides, in powder, 1; Distilled Water, 6: digest all the ingredients, except the Canada balsam, in a water bath for two hours, stirring them constantly, then strain, and separate the plaster from the watery liquid; mix the Canada balsam with the plaster melted in a shallow vessel, and pass strips of paper over the surface of the hot liquid, so that one surface of the paper shall receive a thin coating of plaster. The paper is usually ruled so as to indicate square inches.

(U.S. (Charta Cantharidis), Belg. (Charta Epispastica No. 1), Fr. (Papier Épispastique No. 1); not in the others.)

COLLODIUM VESICANS. Blistering Collodion. [NEW.]

Blistering Fluid, 20; Pyroxylin, 1: add the Pyroxylin to the liquid in a stoppered bottle, and shake till dissolved.

Note.—It is necessary that Pyroxylin Brit. Ph. should be used, or disappointment will result.

(Belg. Dan. Ger. Russ. U.S.; not in Austr. or Fr.)

EMPLASTRUM CALEFACIENS. Yellow. [MODIFIED.]

Cantharides, in coarse powder, 1; boiling Water, 5; expressed Oil of Nutmeg, 1; Yellow Wax, 1; Resin, 1; Soap Plaster, 8; Resin Plaster, 13: infuse the cantharides in the water for six hours, strain and press through calico, evaporate by a water bath till reduced to one-third, then add the rest, melt and stir all together. =(about 1 in 25).

The quantities of Soap Plaster and Resin Plaster have been reversed.

(U.S. Emplastrum Picis cum Cantharide, 1 in 36; not in the others.)

EMPLASTRUM CANTHARIDIS. Dark brown.

Cantharides, in powder, 12; Yellow Wax, 7½; prepared Suet, 7½; Resin, 3; prepared Lard, 6: melt the last four together, and stir in the first: continue the stirring until cold. =(1 in 3).

(Austr. and Fr., 1 in 3; Belg. about 1 in 3; Dan. Ger. and Russ., about 1 in 4; not in U.S.)

Emplastrum Cantharidum Perpetuum.—Austr. 1 in 5½; Belg. and Russ. 1 in 8; Dan. 1 in 7½; Ger. 1 in 10; not in Fr. or U.S.

Oiled tissue paper, or very thin silk, is sometimes placed between the plaster and the skin, to prevent irritant action on the urinary organs. In France, powdered Camphor is sprinkled on the blister for the same purpose.

LIQUOR EPISPASTICUS. [ALTERED.]

Blistering Liquid. *Syn.* Linimentum Cantharidis.

Cantharides, in powder, 5; Acetic Ether, 20: mix the Cantharides with 3 of Acetic Ether; pack in a percolator, and after twenty-four hours add Acetic Ether to percolate 20. =(1 in 4).

This preparation is now nearly twice the strength of that in 1867 Pharmacopœia. It should be kept in a stoppered bottle.

(U.S. (Linimentum) Cantharides 15, Oil of Turpentine to make 100, digest hot three hours and strain; not in the others.)

TINCTURA CANTHARIDIS. Straw colour.

Cantharides, in coarse powder, 1; Proof Spirit, 80: macerate, agitating occasionally, for seven days in a closed vessel, strain, press, filter, and add sufficient proof spirit to make up 80. =(1 in 80).

Dose.—5 to 20 minims.

(Brit. 1 in 72; Dan. 1 in 30, also 1 in 5; U.S. 1 in 20; Austr. and Belg. 1 and 5; Fr. 1 and 10, also with Acetic Ether 1 and 10; Ger. and Russ. 1 and 10; all by weight.)

UNGUENTUM CANTHARIDIS. Olive brown.

Cantharides, 1; Olive Oil, 6; Yellow Wax, 1: digest the cantharides in the oil for twelve hours in a covered vessel; then place the vessel in boiling water for ¼ hour; strain through muslin with strong pressure, add the product to the wax melted, and stir till cold. =(about 1 in 7).

Employed to promote discharge from a blistered surface.

(Belg. 1 in 11; Fr. Pommade Epispastique Verte, 1 in 33, and P. E. Jaune, 1 in 17; Ger. about 1 in 5; Russ. 1 in 5; Dan. Ung. Canth. Simplex, about 1 in 5; also (Viride) about 1 in 4; not in Austr. or U.S.)

Not Official.

Hair Wash.—Vinegar of Cantharides, 1; Glycerine, 1; Tincture of Bark, ½; Orange-flower Water, 8; Rose Water, 8: mix.

Wash for Strengthening the Hair.—Tinct. Cantharides, Rectif. Spirit, Distilled Vinegar, Lime Water, of each 5 oz.; Sulphate of Quinine, 6 grs.; Aromatic Vinegar, 1 drm.: mix.

Linimentum Crinale.—Cantharidine, 1 gr.; Acetic Ether, 6 drms.: dissolve and add Rectified Spirit, 3 oz.; Castor Oil, 1 oz.; Oil of Lavender, 15 minims.

This Liniment is highly recommended for application to the head where the hair is falling off; but after applying it a few times the head should be washed, or it may accumulate and cause too much irritation.

Unguentum Stimulans.—Erasmus Wilson's. Cantharides in Powder, 3; Lard, 12: macerate with a moderate heat for twenty-four hours and filter through paper.

The following are also employed as blistering agents:—

Brown's Blistering Tissue; Papier d'Albespeyres, No. 1, 2, and 3: 3 is the strongest.

CAPSICI FRUCTUS.

CAPSICUM FRUIT.

The dried ripe fruit of *Capsicum fastigiatum*; imported from Zanzibar, and distinguished in commerce as Guinea Pepper and Pod Pepper.

That from Nepaul has the finest flavour. These in powder are sold as Cayenne Pepper.

It yields its virtues to Water, Alcohol, Ether, Acetic Ether, and the fixed and volatile Oils.

The ash was determined from three samples of Fruits, also three samples of Pulvis Capsici: Fruits yielded, 3·75, 5·38, 4·52 p. c.; Pulvis Capsici, 4·44, 6·31, 4·49 p. c.

Medicinal Properties.

A powerful stimulant, used chiefly as a condiment. In intermittent fevers with Quinine, in low forms of fever, diarrhœa, cholera, and in the black vomit of hot climates. In dyspepsia and sea-sickness. Used as a gargle in scarlet fever and malignant sore throat. Externally as a rubefacient.

Dose.—½ to 1 gr. of the powder in a pill, or in dinner pills.

(In all the Pharmacopœias, except Austr.; Fr. Poivre de Guinée.)

Preparations.

TINCTURA CAPSICI. Light yellowish-green.

Capsicum, bruised, ¾; Rectified Spirit, 20; macerate forty-eight hours with 15 of the spirit, agitating occasionally, pack in a percolator, and let it drain, then pour on the remaining spirit; as soon as it ceases to drop, press the marc, filter and add spirit to make up 20.
=(1 in 27 nearly).

Dose.—10 to 20 minims.

Tinct. Capsici, 1½ drms.; Tinct. Aurant., 4 drms.; Syr. Aurant., 4 drms.; water to 6 ounces. Take a tablespoonful as required three or four times a day for dipsomania.—*Brit. Med. Jl.*, Sept. 25, 1875.

(Belg. 1 and 5; Dan. Ger. and Russ. 1 and 10; U.S. 1 in 20; all by weight; not in Austr. or Fr.)

Not Official.

Gargarisma.—Tinctura Capsici, ½ to 1 drm. in 8 oz. of infusion of Roses.

Oleoresina Capsici, U.S.P.

Capsicin.

An acrid soft resin or oil obtained by digesting the Alcoholic Extract in Ether and evaporating the Ethereal solution. It is a thick liquid of a yellowish red colour, which becomes very fluid when gently heated, and at a high temperature volatilizes. ½ a grain only, thus volatilized in a large room, will cause all who respire the air of the room to cough and sneeze. It is soluble in Alcohol, Ether, and Oil of Turpentine.

Emplastrum Capsici, U.S.P.

Spread an even layer of Resin Plaster on muslin, and allow it to cool; then apply a thin coating of Oleo-resin of Capsicum, by means of a brush, leaving a narrow blank margin along the edges.

Each square inch should contain 1 grain of Oleo-resin of Capsicum.

Linimentum Capsici (the concentrated Tincture of Dr. Turnbull).—Capsicum, 1; Rectified Spirit, 3: macerate seven days and strain.

Used externally for swollen chilblains and as a counter-irritant, but not when the skin is broken. For chilblains, saturate a piece of sponge or flannel with the tincture, and rub the chilblain well until a strong tingling is produced; continue daily until recovery. A small dossil of lint or cotton, dipped into the tincture, is an excellent remedy for toothache.

Tissue paper imbued with a strong tincture of this drug, and perhaps a little mustard oil, is sold as a sinapism, to produce counter-irritation, under the name of Sinapine.

CARBO ANIMALIS.

ANIMAL CHARCOAL. BONE BLACK.

The residue of bones which have been exposed to a red heat without the access of air; consists principally of Carbon, and Phosphate and Carbonate of Calcium.

(Belg. Fr. Russ. and U.S.; not in Austr. Dan. or Ger)

CARBO ANIMALIS PURIFICATUS.

PURIFIED ANIMAL CHARCOAL.

From which its earthy salts have been almost wholly removed.

Bone Black, 16; Hydrochloric Acid, 10; Distilled Water, a sufficiency.

Digest the Bone Black in the acid mixed with twice the quantity of water at a moderate heat for two days, agitating occasionally, thoroughly wash on a calico filter, until what passes through gives scarcely any precipitate with nitrate of silver; dry, and heat to redness, in a covered crucible.

Tests.—If it contain Carbonate of Calcium, Hydrochloric Acid will cause effervescence; and if Phosphate of Calcium be present, the acid will dissolve the salt, and yield it as a precipitate on the addition of Ammonia. When burned at a high temperature, with a little red Oxide of Mercury and free access of air, it leaves scarcely any residue.

Medicinal Properties.

Dr. Garrod, and Dr. Rand of Philadelphia, state that it has the property of counteracting the poisonous effects of Morphine, Strychnine, and Aconitine. Dr. Rand says that these alkaloids may be swallowed with impunity if mixed in due proportion with Purified Animal Charcoal. It destroys the fœtor of ulcers, etc. It is much used as a decolorizing agent in various pharmaceutical processes, and will decolorize Claret.

Dose.—20 to 60 grs.

(Belg. Fr. U.S.; not in the others.)

A convenient mode of application to putrid sores has been furnished by Messrs. Pichot et Cie, Paris, in their "Papiers Carbonifères," and a softer substance called Charpie, also Sachets de Charpie Carbonifères.

CARBO LIGNI.

WOOD CHARCOAL.

Wood charred by exposure to a red heat without access of air.

The Oak, Beech, Hazel, Willow, and Poplar are employed.

Test.—When burned at a high temperature, with free access of air, it leaves not more than 2 per cent. of ash.

Medicinal Properties.

Antiseptic and absorbent. Given in powder or in capsules in cases of distension by intestinal gas, and in foul eructations; also in dyspepsia attended with flatus and acidity. Externally, as a poultice, it absorbs the fœtor of ulcers.

Respirators of Charcoal are made to protect the lungs from poisonous gases.

Dose.—20 to 60 grs.

(In all the Pharmacopœias; Fr. Charbon Végétal.)

Preparation.

CATAPLASMA CARBONIS.

Wood Charcoal, in powder, 1; crumb of Bread, 4; Linseed Meal, 3; boiling Water, 20: soak the bread in the water near the fire for ten minutes, add the linseed meal and half the charcoal, stirring to a soft poultice, sprinkling the remainder of the charcoal on the surface.

(Not in other Pharmacopœias.)

Charcoal Biscuits, each containing 10 grains.

Charcoal capsules of gelatine, each containing 4 grains, are also in use.

Charcoal Cautery, Getchell's. Charcoal, 21; Nitre, 1; Powder of Acacia, 3; Water to make a paste and form sticks about 2 inches long, and thick as the little finger, but rounded at the point, and then dried.

CARDAMOMI SEMINA.

CARDAMOMS.

The dried ripe seeds of the Malabar Cardamom *Elettaria Cardamomum*, best kept in their pericarps, which are to be removed and rejected when the seeds are employed. Cultivated on the Malabar coast.

The ash was determined of Pericarps, Seeds, and Pulvis Cardamomi: Pericarps (three samples) yielded 10·4, 12·0, 13·4 p. c.; Seeds (three samples), 2·38, 2·81, 3·85 p. c.; Pulvis (three samples), 7·56, 6·33, 9·93 p. c.; these results seem to indicate that the Pulvis Cardamomi was not obtained from the seeds only, as directed in the Pharmacopœia.

Medicinal Properties.

Cordial and carminative; less heating and stimulating than some others. A useful adjuvant to purgatives to prevent griping.

Dose.—Of the seeds powdered, 5 to 20 grs.

1 of fruit yields ¾ of seeds.

(In all the Pharmacopœias.)

Contained in Extractum Colocynthidis Compositum, Pulvis Cinnamomi Compositus, Pulvis Cretæ Aromaticus, Tinctura Gentianæ Composita, Tinctura Rhei, and Vinum Aloes.

Preparations.

TINCTURA CARDAMOMI COMPOSITA. Deep lake colour. [MODIFIED.]

Cardamom seeds, freed from their pericarps, bruised, 1 oz.; Caraway fruit, bruised, 1 oz.; Raisins, freed from seeds, 8 oz.; Cinnamon Bark, bruised, 2 oz.; Cochineal, in powder, 220 grains; Proof Spirit, 80 oz.: macerate forty-eight hours with ¾ of the spirit, agitating occasionally, pack in a percolator, and let it drain, pour upon it the remainder of the spirit, and when it ceases to drop, press the marc, filter, and add sufficient Proof Spirit to make up 80 oz. =(1 in 80).

Note.—If the above B. P. instructions are followed the product will be more than 80 oz., without making up.

The quantity of Cochineal has been slightly reduced.

Dose.—½ to 2 drms.

U.S. 1 in 50, contains Glycerine, and is made with the *fruit* of the Cardamoms, also Tinct. Cardamomi, 15 in 100; not in the others.)

Contained in Decoctum Aloes Compositum, Mistura Ferri Aromatica, Mistura Sennæ Composita, Tinctura Chloroformi Composita.

Not Official.

CARNIS EXTRACTUM.

EXTRACT OF MEAT.

Carnis Extractum, Ger.—Has an agreeable odour, grateful flavour, and is freely soluble in water.

Liebig says, "Vegetable Albuminates contained in bread, peas, beans, and potatoes are identical with Albuminates contained in the flesh of animals; and when these are added to extract of meat, they impart to it the peculiar nutritive value which distinguishes meat in our estimation from other food."

CARUI FRUCTUS.

CARAWAY FRUIT.

The dried fruit of *Carum Carui*. Cultivated in England and Germany. The biennial herb flowers in the second year, and the fruit ripens in July or August. Yields from 3 to 6 per cent. of Oil.

The ash was determined from three samples of Seeds and three samples of Pulvis Carui: Seeds, 6·68, 5·72, 7·16 p. c.; Pulvis, 5·87, 6·51, 7·05 p. c.

Medicinal Properties.

Aromatic, stomachic, and carminative. Used occasionally in flatulent colic, and as an adjuvant to other medicines.

(In all the Pharmacopœias.)

Contained in Conf. Opii, Conf. Piperis, Pulv. Opii Comp., Tinct. Cardamomi Comp., and Tinctura Sennæ.

Preparations.

AQUA CARUI.

Caraway Fruit, bruised, 1; Water, 20: distil 10. =(1 in 10).

Dose.—1 to 2 oz.

(Russ. made with oil; not in the other Pharmacopœias.)

OLEUM CARUI. Pale straw, gradually becoming darker by keeping.

The Oil distilled in Britain.

Sp. g. (several samples examined), ·909 to ·914.

Added to purgative medicines to prevent griping.

Dose.—1 to 4 minims.

(Austr. Ger. and U.S.; Fr. Huile Volatile de Carvi; Dan. Aetheroleum Carvi; Russ. sp. g. ·900—·960.)

CARYOPHYLLUM.

CLOVE.

The dried flower-bud of *Eugenia Caryophyllata*.

Cultivated in Penang, Bencoolen, and Amboyna.

The ash was determined from three samples of Cloves and three samples of Pulvis Caryophylli: Cloves yielded, 4·78, 4·82, 5·11 p. c.; Pulvis, 6·97, 6·97, 6·13 p. c.

Test.—They emit, when indented with the nail, an oil of a strong fragrant odour.

Medicinal Properties.

Stimulant, aromatic, and carminative; sometimes administered in substance or infusion to correct nausea, vomiting, and flatulency, and to promote digestion. But chiefly used to qualify other medicines.

The powder used in Infus. Aurantii. Co., Mist. Ferri Aromatica, and Vin. Opii.

Dose.—5 to 10 grs.

(In all the Pharmacopœias; Fr. Girofles.)

Preparations.

INFUSUM CARYOPHYLLI.

Cloves, bruised, 1; boiling Distilled Water, 40: infuse half an hour, and strain. =(1 in 40).

Dose.—1 to 2 oz.

(Not in the other Pharmacopœias.)

INCOMPATIBLES.—Lime Water, Salts of Iron, Mineral Acids, Gelatine.

OLEUM CARYOPHYLLI.

The Oil distilled in Britain.

Sp. g. (several samples examined) 1·041 to 1·063.

Colourless or pale yellow when recently distilled, and becomes reddish-brown by keeping.

Soluble 1 in 60 of Proof Spirit; in all proportions of Rectified Spirit, Ether, and Strong Acetic Acid.

Used as an adjunct to purgatives; or applied to carious teeth.

Contained in Confect. Scammonii, Pil. Colocynth. Co., Pil. Coloc. et Hyoscyami.

Dose.—1 to 4 minims.

(In all the Pharmacopœias; Belg. (Essentia Caryophyllorum.)

CASCARILLÆ CORTEX.

CASCARILLA BARK.

The Bark of *Croton Eluteria*, from the Bahamas.

Gives off a fragrant odour when burnt.

Medicinal Properties.

Aromatic, stomachic, and tonic. Used in dyspepsia, chronic diarrhœa, dysentery, and in recovery from acute diseases. Formerly used in intermittent fevers, but now almost entirely superseded by Cinchona for that purpose.

Dose.—In powder 10 to 30 grains.

(In all the Pharmacopœias.)

Preparations.

INFUSUM CASCARILLÆ. [MODIFIED.]

Cascarilla Bark, in No. 20 powder, 1; boiling Distilled Water, 10: infuse half an hour, and strain. =(1 in 10).

The time has been reduced from one hour to half-an-hour.

Dose.—1 to 2 oz.

(Not in the other Pharmacopœias.)

INCOMPATIBLES.—Lime Water, Metallic Salts, and Mineral Acids.

This infusion quickly changes, and will scarcely keep good for a day in summer. 1 oz. of Infusion is of about the same therapeutical strength as ½ oz. of Tincture, but the infusion is by far the more aromatic, and when it is prescribed with an aromatic Tincture keeps good.

TINCTURA CASCARILLÆ. Dark reddish-brown.

Cascarilla Bark in No. 40 powder, 1; Proof Spirit, 8; macerate forty-eight hours with 6 of the spirit, agitating occasionally; pack in a percolator, let it drain, and pour on the remainder of the spirit, and when it ceases to drop, press the marc, filter, and add proof spirit to make up 8. =(1 in 8).

Dose.—½ to 2 drms.

(Belg. Dan. Fr. and Russ. 1 and 5; not in Austr. Ger. and U.S.)

This tincture is frequently prescribed with the diluted mineral acids, and then the resin is separated, which fills the mixture with minute floccules; it is therefore better, when giving acids, to prescribe the infusion.

CASSIÆ PULPA.

CASSIA PULP.

The pulp obtained from the recently imported pods of the Purging Cassia, *Cassia Fistula*.

Imported from the East or West Indies.

Viscid, blackish-brown, with a sweet taste.

When obtained separately, the pulp frequently contains the seeds and the partition or dissepiments; these should be removed when it is used for pharmaceutical purposes.—*Brit. Pharm.*

Medicinal Properties.

Laxative. Useful in small doses for habitual costiveness. Large doses occasion nausea, flatulence, and griping; generally given in combination.

Dose.—As a laxative, 60 to 120 grs.; as a purgative, 1 to 2 oz.

(Belg. Fruit and Extract, Fr. Pulpe de Casse, also Extrait de Casse, U.S. Fruit; not in the others.)

Contained in Confectio Sennæ; 1 part in 8 nearly.

Not Official.

CASTOREUM.

The dried preputial follicles and their secretion, obtained from the Beaver, *Castor Fiber*, the oil sacs rejected; imported from the Hudson's Bay Territory.

Medicinal Properties.

Moderately stimulant and antispasmodic; occasionally used in hysteria.

Dose.—Of the powder 5 to 10 grs.

(In all the Pharmacopœias except Austr. and U.S.)

Preparation.

TINCTURA CASTOREI. Deep red.

Castor, in coarse powder, 1; Rectified Spirit, 20: macerate seven days, agitating occasionally, strain, press, and add sufficient Rectified Spirit to make up 20. = (1 in 20).

Dose.—½ to 1 drm.

(Dan. 1 in 5; Belg. Fr. Ger. and Russ. 1 and 10; all by weight. Not in Austr. or U.S.)

CATAPLASMATA.

The Cataplasms were contained in the London Pharmacopœia only, and are adopted by the Brit. Ph. with very slight modification. The formulas will be found under the names of the substances from which they are prepared.

The perfection of making a large poultice is to warm the linseed meal in the basin before the fire, to have boiling water at hand, and before mixing to have the muslin handkerchief spread on a piece of flannel on a table, that as soon as mixed it may be spread and applied without loss of time.

CATAPLASMA CARBONIS, 1 in 28.
CATAPLASMA CONII, about 1 juice in 14.
CATAPLASMA FERMENTI. *See* CEREVISIÆ, about 1 in 4.
CATAPLASMA LINI, 1 meal in 3½.
CATAPLASMA SINAPIS, about 1 powder in 5.
CATAPLASMA SODÆ CHLORINATÆ, 1 solution in 7.

Cataplasms that are not official are enumerated in the index.

CATECHU.

CATECHU.

Syn. CATECHU PALLIDUM.

An extract of the leaves and young shoots of *Uncaria Gambier*.

Prepared in Singapore and in other places in the Eastern Archipelago.

It generally occurs in cubical reddish-brown pieces, also in square sticks, porous, bitter and astringent in taste.

Solubility: almost entirely soluble in boiling Water; the solution, when cold, is not rendered blue by Iodine. 75 per cent. is soluble in Rectified Spirit. Of 100 parts, only 50 to 60 are dissolved by cold Water, and the solution is bright. 30 parts of Isinglass precipitate the whole of the astringent matter.

The pale Catechu being already in the Edin., the Brit. 1864 retained it with the Black; but the black is the one adopted by other Pharmacopœias, and is preferred in the arts and manufactures; it is well known to be far superior to the pale in astringency, and always to be had of good quality; it is therefore a matter of surprise and regret that it has been rejected from the British Pharmacopœia.

Medicinal Properties.

A powerful astringent. Used chiefly in diarrhœa and some forms of atonic dyspepsia accompanied with pyrosis; also as a remote astringent for hemorrhage and mucous discharges. Lozenges are the best medium for administering it in relaxed conditions of the uvula.

Dose.—10 to 30 grs. in powder.

INCOMPATIBLES.—The Alkalies, Metallic Salts, and Gelatine.

Preparations.

INFUSUM CATECHU.

Catechu, in coarse powder, 160 grs.; Cinnamon Bark, bruised, 30 grs.; boiling Distilled Water, 10 oz.: infuse half an hour, and strain. =(about 1 in 27).

Dose.—1 to 2 oz.

(Not in the other Pharmacopœias.)

PULVIS CATECHU COMPOSITUS. Reddish-brown.

Catechu, 4; Kino, 2; Rhatany Root, 2; Cinnamon Bark, 1; Nutmeg, 1: all in powder; mix. =(1 in 2½.)

Keep it in a stoppered bottle.

Dose.—20 to 40 grains. Aromatic, astringent.

(Not in the other Pharmacopœias.)

TINCTURA CATECHU. Deep reddish-brown.

Catechu, in coarse powder, 2½; Cinnamon Bark, bruised, 1; Proof

Spirit, 20: macerate for seven days with agitation, strain, press, filter, and add proof spirit to make up 20. =(1 in 8).

Dose.—½ to 2 drms., or for a child 5 to 10 mins.

(U.S. 12 in 100; Belg. Fr. (Tinct. Cachou), Ger. and Russ. 1 and 5; all by weight and with black Catechu. Not in Austr. and Dan.)

TROCHISCI CATECHU. Light brown.

Lozenges made with Catechu, Sugar, and Gum Acacia.

Each lozenge contains 1 grain of Catechu.

Dose.—1 to 6 lozenges.

(U.S. 1 gr. Black Catechu in each; Belg. (Tabella) 3 grs. in each; not in the others.)

Not Official.

CATECHU NIGRUM.—Black Catechu, Pegu Catechu, Cutch.—An extract from the heart wood of Acacia Catechu, dried and imported from Pegu. It generally occurs in irregularly shaped blackish-brown masses, astringent, and bitter in taste.

Solubility: of 100 parts, only 88 are dissolved by cold water, the solution being very turbid. 60 parts of Isinglass precipitate the whole of the astringent matter.

Dose.—5 to 15 grs.

(In all the Pharmacopœias except Austr. Dan. and Brit.)

⁂ As **GUMMI RUBRUM** is advantageously used as a substitute for Catechu, it may be proper to mention it here, but it will be found in the alphabetical order with its preparations.

CERA ALBA.

WHITE WAX.

Yellow Wax, bleached by exposure to moisture, air, and light. Hard, nearly white, translucent.

Test.—Should respond to the tests given under Cera Flava.

Melting points of three samples were determined by the process given under Cera Flava, 140°, 140°, 142° F.

Solubility: entirely in Oil of Turpentine, insoluble in Rectified Spirit, and slightly soluble in Ether; about 1 in 100 of boiling Rectified Spirit; 1 in 10 of boiling Ether.

This wax has been much used in ointments, but the Author has observed that the ointments made with it grow rancid, and when the yellow wax is used the ointment keeps a long time without rancidity.

Medicinal Properties.

Emollient; chiefly employed as an ingredient in Ointments.

(In all the Pharmacopœias; Fr. Cire Blanche.)

Contained in Unguenta Cetacei, Plumbi Subacetatis Comp. and Simplex; also in Suppositoria and Charta Epispastica.

Preparations.

UNGUENTUM SIMPLEX. White. [MODIFIED.]

White Wax, 2; Benzoated Lard, 3; Almond Oil, 3: melt together, and stir till it becomes solid. This is necessary, because the Ointment is apt to granulate if the stirring is not continued until it solidifies. =(1 in 4).

Benzoated Lard now used in the place of Lard.

(U.S. Lard 8, Yellow Wax 2; Austr. Lard 8, White Wax 2; Belg. Lard 17;

White Wax 3; Ger. (Unguentum Cereum), Olive Oil 7, Yellow Wax 3, Fr. (Cérat Simple), Oil of Almonds 6, White Wax 2; Dan. (Ung. Cerae), and Russ. (Ung. Cereum), Olive Oil 6, Yellow Wax 2.)

Not Official.

Cold Cream.—White Wax, 1; Spermaceti, 1; Oil of Almonds, 6; Rose Water, 9; Otto of Rose to perfume it. Melt together, by means of a water bath, the oil, spermaceti, and wax, then gradually add the rose water, and stir till cold.

CERA FLAVA.

YELLOW WAX.

The prepared honeycomb of the Hive-Bee, *Apis Mellifica*.

When quite fresh, is of a golden yellow, but on keeping gets brown.

Sp. g. 0·950 to 0·970.

Solubility the same as Cera Alba.

Tests.—Should be readily and entirely soluble in hot Oil of Turpentine. Should not yield more than 3 per cent. to cold Rectified Spirit, and nothing to Water or to a boiling solution of Soda, the two latter fluids after filtration neither being turbid nor yielding a precipitate on the addition of Hydrochloric Acid. (Absence of Soap, Fats, Japan Wax, and Resin.) Melts at 146° F. (63°·3 C.) when tested as follows. Liquefy a few grains and draw a little of the fluid up into a capillary tube; fix a piece of the capillary tube to the bulb of a thermometer by thread; immerse the bulb and tube in a beaker of water and heat the latter gently; at the moment the opaque rod of wax becomes transparent note the temperature. The solidifying point is 2° or 3° lower than the melting point.

Melting point of ten samples taken, with results as follows:—
143°·5, 142°·5, 143°·5, 143°·5, 143°, 142°·5, 144°, 143°·5, 143°·5, 145° F.

Medicinal Properties.

Chiefly used in medicine as an ingredient of plasters and ointments, and is preferable to White Wax for the purpose, the ointments keeping a long time without becoming rancid.

(In all the Pharmacopœias; Fr. Cire Jaune.)

Contained in several of the Emplastra and Unguenta, and in Pilula Phosphori

CEREVISIÆ FERMENTUM.

BEER YEAST.

The ferment obtained in brewing beer, and produced by *Saccharomyces cerevisiæ*; viscid, semi-fluid, frothy, and consists of numerous microscopic round or oval cells.

Insoluble in Alcohol or Water.

Medicinal Properties.

Has been recommended as an antiseptic and stimulant in typhus and typhoid fevers, and in low states of the nervous system. It is, however, superseded by more convenient medicines.

Dose.—(Fresh) ½ to 1 oz. every two hours, alone or with water.

(Not in the other Pharmacopœias.)

Preparation.

CATAPLASMA FERMENTI.

Beer Yeast, 6; Wheaten Flour, 14; Water 100° F. (37·8° C.), 6: mix. Place the mass near the fire till it rises.

Useful in foul and sloughing ulcers.

CERII OXALAS.

OXALATE OF CERIUM.

$CeC_2O_4.3H_2O$, eq. 234.

Or, more correctly, $Ce_23C_2O_4$, $9H_2O$, eq. 708.

A white insoluble powder. Introduced into practice by Sir James Simpson, of Edinburgh. Cerium was discovered in 1803, and is now obtained chiefly from a mineral called Cerite, which also contains Lanthanum and Didymium.

Tests.—10 grs. when incinerated lose 5·2 grs. in weight; the ash dissolves completely and without effervescence in boiling Hydrochloric Acid (absence of Carbonates), and the resulting solution gives with solution of Sulphate of Potassium a white crystalline precipitate (Sulphate of Cerium and Potassium). If the salt be boiled with solution of Potash and filtered, the filtrate is not affected by solution of Chloride of Ammonium (absence of Alumina), but when supersaturated with Acetic Acid it gives with Chloride of Calcium a white precipitate (Oxalate of Calcium), which is soluble in Hydrochloric Acid.

Medicinal Properties.

Sedative, tonic. Of great value in general chronic intestinal eruption, irritable dyspepsia, gastrodynia, and pyrosis, in chronic vomiting, and vomiting during pregnancy. In convulsive diseases, as chorea and epilepsy, it does not produce the discoloration of the skin, as does the use of Nitrate of Silver.

(Brit. Pharm. dose 1 to 2 grains.)

It is taken in 5 or 10 grain doses as a powder mixed with a little water.

Sir James Simpson introduced it into practice, and prescribed it in 10-grain doses for sickness during pregnancy. (*Practitioner*, June, 1878.) It can be safely administered in 10-grain doses 3 times a day for many days in succession, the only unpleasant symptom when so used was slight dryness of mouth, that appeared after several days. It was most efficacious in the treatment of chronic cough, and the initial dose should be 5 grains. It did not disturb the stomach; on the contrary, relieved nausea and improved digestion. (Conclusions arrived at by the Committee of the New York Therapeutical Society on April 9, 1880, *New York Medical Record*, May 1, 1880.)

(U.S.; not in the others.)

CETACEUM.

SPERMACETI.

A white concrete fatty substance obtained mixed with Oil from the head of *Physeter macrocephalus*, or Sperm Whale.

It inhabits the Pacific and Indian Oceans.

Nearly pure Cetine, separated by cooling, filtration, and pressure from the oil, and afterwards purified.

Cetine or Palmitate of Cetyl, when saponified yields Ethal (the Hydrate of

Cetyl) and not Glycerine (the Hydrate of Glyceryl). Most Oils and Fats are Oleates, Palmitates, and Stearates of Glyceryl, which when saponified yield Glycerine and Oleates, Palmitates and Stearates of the metals.

Soluble, slightly in Rectified Spirit; 1 in 1 of boiling Rectified Spirit; 1 in 6 of Ether; 1 in 1 of boiling Ether; 4 in 5 of Chloroform. Can be reduced to powder by the addition of Rectified Spirit.

Tests.—Scarcely unctuous to the touch; melting point 111° to 122° F. (43°·9 to 50° C.), when tested by the method described under Cera Flava. Melting point of three samples were taken, all three 113° F.

Contained in Charta Epispastica.

(In all the Pharmacopœias.)

Medicinal Properties.

Emollient and demulcent, in chronic diarrhœa. Externally it is much employed for ointments and cerates.

Dose.—20 to 60 grs. boiled in milk, two or three times daily.

(In all the Pharmacopœias; Fr. Blanc de Baleine.)

Preparations.

UNGUENTUM CETACEI. Cream colour. [MODIFIED.]

Spermaceti, 5; White Wax, 2; Almond Oil, 20; Benzoin, ¼: melt the first three together, add the Benzoin, continue the heat for two hours, frequently stirring the mixture, then strain and stir till cold.

Benzoin is now added.

The Author finds 17 of Oil sufficient in summer.

(Austr. (Ceratum Cetacei) Spermaceti, White Wax, Oil of Almonds, equal parts; U.S. (Ceratum Cetacei) Spermaceti 2, White Wax 7, Olive Oil 11; Russ. Spermaceti 3, White Wax 3, Olive Oil 14, Rose Water 2; Dan. Spermaceti 3, White Wax 1, Oil of Almonds 24, Rose Water 12; all by weight. Not in Belg. Fr. and Ger.)

Used as a cool dressing. Applied on lint to broken blisters from walking, it affords great relief, and frequently enables persons to continue the exercise without serious discomfort. It is also recommended to smear on the feet before starting for a long walk on rough ground. The above applies to fresh Spermaceti Ointment without Benzoin; we have no experience of the Brit. Pharm. preparation for this purpose.

Not Official.

Mistura Cetacei.—Spermaceti, 60 grs.; Proof Spirit, 15 minims: finely pulverize the Spermaceti by aid of the spirit, and add by degrees half the yolk of an egg, at first only sufficient to make a stiff paste, which should be made very smooth by diligent trituration, then add the rest, and make up with water to 4 ounces.

Dose.—1½ oz. Given for coughs and irritation of the mucous membrane, has been prescribed for *sickness* during pregnancy, and was once a constant prescription immediately after delivery.

CETRARIA.

ICELAND MOSS.

The dried lichen, *Cetraria Islandica.*

It is a native of the north of Europe.

Almost odourless when dry, but when moistened with water has a feeble seaweed-like odour. Taste mucilaginous and bitter. A strong decoction gelatinises on cooling.

It should be freed from pine leaves, mosses, and other lichens, which are frequently found mixed with it.—*U.S.P.*

Medicinal Properties.

Demulcent, nutritious, and slightly tonic. Well calculated for affections of the mucous membrane of the lungs and bowels, with debility of the digestive organs or system generally. Useful in chronic catarrhs and other chronic pulmonary affections attended with copious purulent expectoration, in dyspepsia, chronic dysentery and diarrhœa, and in debility succeeding acute disease.

(In all the Pharmacopœias, *Lichen Islandicus.*)

Preparations.

DECOCTUM CETRARIÆ.

Iceland Moss, 1: first wash with cold water, then add Distilled Water, 20; boil ten minutes, strain whilst hot and wash the marc to make up 20. =(1 in 20).

Dose.—1 to 4 oz.

(U.S. 1 in 20; Belg. 1 in 25; Fr. (Tisane) 1 in 100; Russ. 1 in 32; not in the others.)

Not Official.

ICELAND MOSS JELLY.—Iceland Moss, 1; Water, 12: boil down to 6, strain, and add Sugar, 2.

CARRAGEEN, or Irish Moss, is sometimes ordered in the place of Cetraria.

CHARTÆ.

CHARTA EPISPASTICA. *See* CANTHARIDES.
CHARTA NITRATA. Ger. *See* POTASSII NITRAS.
CHARTA SINAPIS. *See* SINAPIS.

Not Official.

CHAULMOOGRA OIL.

See GYNOCARDIA.

CHIRATA.

CHIRETTA.

The entire plant dried, *Ophelia Chirata* (annual), collected in Northern India when the fruit begins to form.

Medicinal Properties.

The same as Gentian, but is a purer bitter, without aroma or astringency; given in dyspepsia of gouty subjects.

(U.S.; not in the others.)

Preparations.

INFUSUM CHIRATÆ.

Chiretta, cut small, 1; Distilled Water at 120° F. (48°·9 C.), 40; infuse half an hour and strain. =(1 in 40).

Dose.—1 to 2 oz.

(Not in the other Pharmacopœias.)

Salts of iron may be given in this infusion when a strong bitter is desired as a vehicle.

TINCTURA CHIRATÆ. Very deep brown.

Chiretta, cut small and bruised, 1; Proof Spirit, 8; macerate forty-eight hours with 6 of the spirit, agitating occasionally, pack in a percolator and let it drain, then pour on the remaining spirit; when it ceases to drop, press the marc, filter, and add proof spirit to make 8. =(1 in 8).

Prescribed in 5 minim doses, with acids and tincture of orange to form an acid tonic mixture.

Brit. Ph. dose ½ to 2 drms.

(U.S. 1 in 10; not in other Pharmacopœias.)

CHLORAL HYDRAS.

HYDRATE OF CHLORAL.

$C_2HCl_3O.H_2O$, eq. 165·5.

Chloral, produced by the action of dry chlorine gas on anhydrous alcohol, purified by treatment, first with sulphuric acid and afterwards with a small quantity of lime, and finally converted into the solid hydrate by the addition of water.

Soluble, 4 in 1 of Water; 5 in 1 of Rectified Spirit; 2 in 1 of Ether; 2 in 1 of Glycerine; 1 in 1 of Olive Oil; 1 in 3 of Chloroform; 1 in 10 of Oil of Turpentine.

In colourless crystals, which do not deliquesce on exposure to air. It has a characteristic odour and taste.

Tests.—On the application of a gentle heat it fuses to a colourless transparent liquid, which, as it cools, begins to solidify at a temperature of about 120° F. (48° 9 C.). It boils in a test-tube, with pieces of broken glass immersed in it, at 202° to 206° F. (94°·4 to 96°·7 C.), and at a slightly higher temperature it volatilizes on platinum foil without residue. The aqueous solution is neutral or but slightly acid to test-paper. A solution in chloroform, when mixed by agitation with sulphuric acid, does not impart colour to the acid. 100 grains of hydrate of chloral dissolved in an ounce of distilled water and mixed with 30 grains of slaked lime, submitted to careful distillation with a suitable apparatus, should yield not less than 70 grains of chloroform.

This last test is more conveniently conducted in a graduated tube, thus: place 50 grains of Hydrate of Chloral in the tube and pour on to it a strong solution containing 50 grains of Caustic Potash; cork securely and shake: allow the liquids to separate, and the number of grain-measures of Chloroform (at the bottom), to which must be added 1 for every 200 grain-measures of supernatant liquid, multiplied by 1·5 gives the grains of Chloroform, which should be not less than 35.

(Belg. Hydras Chlorali; Dan. Hydras Chloralicus; Fr. Chloral Hydraté; Ger. Chloralum Hydratum; Russ. Chloralum Hydratum Crystallisatum; U.S. Chloral; not in Austr.)

Medicinal Properties.

An excellent hypnotic, producing sound and placid sleep so much desired in eczema; suitable for hypochondriacal affections, chorea, nervous disturbances, and restlessness, where opium and Indian hemp disagree. Good also in asthma, whooping cough, delirium tremens, scarlet fever, diminishes the temperature of the body, has been found useful in idiopathic tetanus in doses 30 to 60 grains (*Lancet*, Dec. 31, 1870); also for cancer, 20 to 30 grain doses (*Lancet*, May 14 and June 4, 1870); 10 grs. three times a day (*Medical Times*, Dec. 31, 1870).

Dr. Tuke, after trying it on several maniacal patients with good results, reports, "Its advantages over other hypnotics are as follows: that it is more uniform in its action and its effects more lasting, it has no depressing influence, it does not constipate nor produce nausea."

Its great value in obstetric cases, see *Medical Times*, Jan. 1, 1870, *Lancet*, Sept 24, 1870; also in delirium tremens, *British Medical Journal*, July 16, 1870.

An admirable calming draught is made with 15 grs. Hydrate of Chloral, and 5 minims of the Solution of Bimeconate of Morphia.

Dr. Liebreich employs 7 grains, in solution, for subcutaneous injection.

Effects from an overdose or repeated overdoses are cramp in the legs, swimming in the head, flushed face, closed eyes, with injected conjunctiva, and in some cases death. Should not be given in Bright's disease, for it may produce Uræmia.

Dose.—5 to 30 grains.

3 oz. will dissolve in 1 oz. of water, and measure 2 fluid ounces and 5½ drachms; if to this be added 23 minims of water, every minim will contain a grain of chloral.

The solution keeps well, and is handy for dispensing.

ANTIDOTES.—$\frac{1}{20}$ of a grain of Picrotoxine has been found enough for 30 grains of Chloral. (*British Medical Journal*, April, 1875.)

Stomach pump or emetics, cold affusion to head and spine, electro-magnetism, artificial respiration.

Preparation.

SYRUPUS CHLORAL. [MODIFIED.]

Hydrate of Chloral, 80 grains; Distilled Water, 1½ drm.; Syrup, to make 1 oz.; mix. =(1 gr. in 6 mins.).

Sp. g. about 1·320.

The last Brit. Pharm. preparation contained more water and less syrup.

Dose.—½ to 2 drms.

(Belg. Hydrat Chloral 5, Syrupi Menthæ 95; not in the others.)

CROTON-CHLORAL HYDRATE. *See* BUTYL-CHLORAL HYDRAS, p. 87.

CHLORI LIQUOR.

SOLUTION OF CHLORINE.

Chlorine Gas dissolved in about half its volume of Water, and constituting about ·6 per cent. by weight of the solution.

A yellowish-green liquid, smelling strongly of Chlorine.

Hydrochloric Acid, 6; Black Oxide of Manganese, in fine powder, 1; Distilled Water, 34: put the manganese into a gas-bottle, pour on it the acid mixed with 2 of the water; apply a gentle heat, and pass the gas through a bottle containing 2 more of water into the remainder of the water contained in a large bottle, which is to be kept cold till the gas ceases to come over; the bottle should then be closed by the hand and shaken till the gas is absorbed. Keep it in a green glass bottle and in a cool place.

Tests.—Sp. g. 1·003. Evaporated, it leaves no residue. When 20 grains of Iodide of Potassium, dissolved in 1 ounce of distilled water, are added to 1 fluid ounce (439 grains by weight) of this preparation, the mixed solution acquires a deep red colour, which requires for its discharge 750 grain-measures of the volumetric solution of Hyposulphite of Sodium, corresponding to 2·66 grains of Chlorine. Test explained under CALX CHLORATA.

(In all the Pharmacopœias. Austr. and Belg. Aqua Chlori; U.S. Aqua Chlori; Ger. Aqua Chlorata (contains ·4 per cent. of Gas); Fr. Chlore Dissous; Dan. Solutio Chlori; Russ. Chlorum Solutum.)

Medicinal Properties.

Stimulant and antiseptic. Useful in advanced stages of scarlatina, typhoid fever, and chronic affections of the liver. Diluted, as a gargle in small-pox, scarlatina, and putrid sore throat. As a wash for ulcers, cancerous sores, buboes, and large abscesses. Dr. Scott, of India, gave it for biliary obstructions in conjunction with the Nitro-hydrochloric Acid baths.

Dose.—10 to 20 minims, in a wineglassful of water.

INCOMPATIBLES.—Salts of Lead and Silver.

ANTIDOTES.—In case of poisoning by Chlorine Water, the antidotes are, Albumen, White of Egg, Milk, Flour.

VAPOR CHLORI. *See* CALX CHLORINATA.

Not Official.

LIQUOR CHLORI.—Chlorate of Potash, 30 grs.; Hydrochloric Acid, ½ oz.; Water to 1 oz.: mix.—*London Hospital.*

CHLOROFORMUM.

CHLOROFORM.

$CHCl_3$, eq. 119·5.

Syn. TERCHLORIDE OF FORMYL.

It is a colourless, limpid, and volatile liquid, obtained by distillation from a mixture of Chlorinated Lime, Slaked Lime, and weak Spirit, the heat being very carefully applied. Burns, though not readily, with a green smoky flame.

Solubility, 10 in 7 of Rectified Spirit; in all proportions of Ether; freely in Olive Oil and Spirit of Turpentine. In Water at 32° F. 1 in 150, at 60° F. 1 in 185, at 86° F. 1 in 210, at 113° F. 1 in 200, at 130° F. 1 in 192. Will not dissolve in Glycerine.

Chloroform acts on vulcanite, and dissolves Caoutchouc, Gutta-percha, Mastic, Elemi, Tolu, Benzoin, and Copal. Amber, Sandarac, Lac, and Wax are only partially soluble. It also dissolves Iodine, Bromine, most of the organic alkaloids, the fixed and volatile oils, most resins and fats. It dissolves Sulphur and Phosphorus sparingly.

Tests.—Sp. g. 1·497. On being shaken with Sulphuric Acid the latter is not coloured to any greater extent than that producible by Absolute Chloroform to which 1 per cent. of Ethylic Alcohol has been added. Dropped into water, it suddenly sinks and remains without opacity. It evaporates speedily, and leaves no residue and no unpleasant odour. Evolves no gas when Potassium is dropped into it.

NOTE.—Chloroform should not be prescribed with weak spirits or Glycerine, as it separates.

Mixed with strong spirits, Camphor Liniment, Soap Liniment, Olive Oil, or Oil of Turpentine, it dissolves perfectly, thus: Chloroform, Oil of Turpentine, of each 1, Soap Liniment 2, makes a clear liniment.

Medicinal Properties.

Internally, a sedative, narcotic, and antispasmodic, given on sugar for sea-sickness. May be given as an antiperiodic, when Bark and Quinine fail to effect a cure. Externally, stimulant in senile gangrene and sloughing ulcers. The vapour is often applied to the eye, and also to the rectum or vagina. Its chief use, however, is to produce anæsthesia by inhalation during surgical operations, and the quantity required for each inhalation must depend on the duration of the operation to be performed. With Camphor relieves toothache. Externally, applied immediately after the sting of the wasp, takes away the pain and prevents further mischief. A powerful auxiliary to Liniments of Aconite, Belladonna, and Hyoscyamus.

Dose.—1 to 5 minims, with yolk of egg and mucilage, in syrup, or in a teaspoonful of brandy. *Brit. Pharm. dose.*—3 to 10 minims.

(Austr. sp. g. 1·490 to 1·500; Belg. sp. g. 1·491; Dan. Purum sp. g. 1·490 to 1·494; Fr. sp. g. 1·490; Ger. sp. g. 1·492 to 1·496; Russ. sp. g. 1·485 to 1·489; U.S. Purificatum sp. g. 1·485 to 1·490.)

ANTIDOTES.—In case of overdose of Chloroform, the antidotes are, fresh pure air and artificial respiration (*Med. Times*, August, 1874), and Nitrite of Amyl (*Lancet*, May 8, 1875).

Preparations.

AQUA CHLOROFORMI.

Chloroform, 1 drm.; Distilled Water, 25 oz.: dissolve by shaking. =(1 in 200).

Dose.—½ to 2 oz.

LINIMENTUM CHLOROFORMI. Faint straw colour.

Chloroform, 1; Liniment of Camphor, 1: mix. =(1 in 2).

The oil in the Camphor Liniment prevents the evaporation of the Chloroform.

Stimulating on application to a tender skin. Should not be applied to the nape of the neck.

(Fr. Chloroform 1, Almond Oil 9; U.S. Chloroform 4, Soap Liniment 6; not in others.)

SPIRITUS CHLOROFORMI. Colourless.

Chloroform, 1; Rectified Spirit, 19: dissolve. =(1 in 20).

Formerly called Chloric Ether, and of various strengths.

Test.—Sp. g. ·871.

Dose.—10 to 60 minims. 10 or 20 minims are frequently prescribed to give a sweetness to draughts, and to cover nauseous flavours.

(U.S. Chloroform 1, Alcohol 9; not in the other Pharmacopœias.)

TINCTURA CHLOROFORMI COMPOSITA. Deep lake colour.

Chloroform, 2; Rectified Spirit, 8; Compound Tincture of Cardamoms, 10: mix. =(1 in 10).

Dose.—20 to 60 minims.

The Chloroform will separate if this Tincture is prescribed in too little water.

TINCTURA CHLOROFORMI ET MORPHINÆ. [NEW.]

Chloroform, 2 oz.; Ether, ½ oz.; Rectified Spirit, 2 oz.; Hydrochlorate of Morphine, 16 grs.; Diluted Hydrocyanic Acid, 1 oz.; Oil of Peppermint, 8 mins.; Liquid Extract of Liquorice, 2 oz.; Treacle, 2 oz.; Syrup to make 8 oz.: dissolve the Hydrochlorate of Morphine and Oil of Peppermint in the Spirit, and add the Chloroform and Ether. Mix the Liquid Extract of Liquorice and Treacle with 3 oz. of Syrup, add this to the previously formed solution, mix them thoroughly, add the Hydrocyanic Acid, and increase the volume to 16 oz. by further addition of Syrup.

Dose.—5 to 10 minims.

This formula appears to be founded upon the one given below, but it contains four times the quantity of Morphine.

Not Official.

Liquor Chloroformi Camphoratus.—Camphor, 1; Chloroform, 2: dissolve.

A remedy for toothache, and topically applied for rheumatism.

Liquor Chloroformi Compositus.—Chloroform, 4 oz.; Ether, 1 oz.; Rectified Spirit, 4 oz.; Treacle, 4 oz.; Extract of Liquorice, 2½ oz.; Muriate of Morphia, 8 grs.; Oil of Peppermint, 16 minims; Syrup, 17½ oz.; Prussic Acid (2 per cent.), 2 oz.: dissolve the Muriate of Morphia and the Oil of Peppermint in the Rectified Spirit; mix the Chloroform and Ether with this solution; dissolve the Extract of Liquorice in the Syrup, and add the Treacle; shake these two solutions together and add the Prussic Acid.

Dose.—5 to 10 minims.

Mistura Chloroformi c. Ammoniâ.—Spirit of Chloroform, 15 minims; Carbonate of Ammonia, 3 grs.; Infusion of Gentian to 1 oz. *Dose*, 1 oz.—*London Ophthalmic Hospital.*

Unguentum Chloroformi.—Chloroform, 1; Lard, 2: blend quickly by trituration.

Vapor Chloroformi.—Chloroform, 15 minims for one inhalation.

Tetrachloride of Carbon, sp. g. 1·590. Has been used to produce anæsthesia; its action is said to be effective and pleasant to the patient.

Bichloride of Methylene.—Introduced by Dr. Richardson in November, 1867. It is a limpid dense fluid, sp. g. varies; when dropped into water about one-fourth of it is dissolved, the remainder separates like chloroform at the bottom of the vessel as a perfectly clear and distinct fluid, and the whole has a sweet pleasant odour, without the least smell of ether. It is now used in the larger operations.

Dr. Day says that it has the advantage over chloroform in that it is less apt to cause sickness, is more agreeable to inhale, and causes less excitement preparatory to the stage of anæsthesia; rarely more than 3 to 4 drms. are required for an operation lasting half an hour, and consciousness returns in a few seconds after inhalation is discontinued. He uses Dr. Junker's inhaler.

A.C.E.—Alcohol (s. g. ·838), 1; Chloroform (s. g. 1·497), 2; Ether (s. g. ·725), 3: mix.

Used as an anæsthetic in place of Chloroform. (*Med. Chir. Trans.*, vol. 47, 1864, p. 341.)

Regnauld's Anæsthetic Mixture.—Chloroform 4; Methylic Alcohol 1: mix.

Used as an anæsthetic in the place of Chloroform. (*Brit. Med. Journ.*, July, 1883, p. 106; also March, 1884, p. 452.)

CHRYSAROBINUM.

CHRYSAROBIN.

Syn. Araroba Powder; Goa Powder.

The medullary matter of the stem and branches of *Andira Araroba*, dried and powdered; containing more or less Chrysophanic Acid according to age and condition, and yielding much Chrysophanic Acid by oxidation. *As purified by solvents it is* a light brownish-yellow, minutely crystalline powder, tasteless and inodorous.

Note.—The words in italics have been added since the publication of the Brit. Pharm. 1885, but even now difficulties will arise. What will be the colour of Unguentum Chrysarobini? Brit. Pharm. *as amended* indicates it to be made with Araroba Powder, which is not a light brownish-yellow, and no description is given of Chrysarobin.

Preparations.

UNGUENTUM CHRYSAROBINI.

Chrysarobin, 20 grs.; Benzoated Lard, 480 grs.: melt the Lard, add the Chrysarobin, and stir them together, maintaining a moderate temperature so as to promote solution; then remove the heat and stir till cold.

Not Official.

UNGUENTUM CHRYSAROBINI PURIFICATA. *Syn.* UNG. ACIDI CHRYSOPHANICI. Purified Chrysarobin, 20 grs.; Benzoated Lard, 480 grs. Prepare in the same manner as above.

Medicinal Properties.

It has been found efficient in chronic psoriasis, but it requires watching. It stains the skin yellow.

CIMICIFUGÆ RHIZOMA.

CIMICIFUGA.

Syn. ACTÆÆ RADIX.

The dried rhizome and rootlets of *Cimicifuga Racemosa.*

Although appearing for the first time in the British Pharmacopœia, it has been known in Pharmacy for years under the name of *Actæa Racemosa.*

Medicinal Properties.

Given for neuralgia and rheumatism.

Preparations.

EXTRACTUM CIMICIFUGÆ LIQUIDUM. [NEW.]

Mix 20 of Cimicifuga, in No. 60 powder, with 40 of Rectified Spirit, and macerate forty-eight hours; then pack in a percolator and let it drain, then pour on more Spirit until the Cimicifuga is exhausted. Reserve the first 15 of the percolate, and evaporate the remainder by a water bath to a soft extract; dissolve this in the reserved portion, and add to it Spirit to make 20. =(1 in 1).

Dose.—3 to 30 minims.

TINCTURA CIMICIFUGÆ. [NEW.]

Macerate 1 of Cimicifuga, in No. 40 powder, with 6 of Proof Spirit for forty-eight hours, agitating occasionally, pack in a percolator and let it drain, then pour on 2 of Proof Spirit; finally press, filter, and add Proof Spirit to make 8. =(1 in 8).

Now included in B. P.; was a "Not Official" in Companion 1866, see p. 31.

Dose.—15 to 60 minims.

CINCHONA CORTEX.

CINCHONA BARK.

The dried bark of *Cinchona Calisaya, C. officinalis, C. succirubra, C. lancifolia,* and other species of *Cinchona,* from which the peculiar alkaloids of the bark may be obtained.

Used in the preparation of Cinchonidinæ Sulphas, Cinchoninæ Sulphas, Quininæ Hydrochloras, Quininæ Sulphas.

Salts of Quinine and Cinchonine may also be obtained from some species of Remijia.

Only Red Cinchona Bark is now official for the Galenical preparations.

The ash was taken of six samples of Cinchona Bark:—Yellow Bark, 2·01 p. c. and 1·67 p. c.; Pale Bark, 2·95 p. c.; Red Bark, 3·07 p. c. and 2·06 p. c.; Cinchona nitida, 2·27 p. c.

(Austr. any species, especially Calisaya, Fuscus, Ruber; Belg. China Flava, China Fusca, China Ruber; Dan. China Calisaya, Fuscus, Ruber; Fr. Quinquina any species; Ger. any species, especially Succirubra; Russ. Cinchona Calisaya, Fuscus, Ruber; U.S. any species of Cinchona, especially Flava, Rubra.)

The Peruvian bark was known in Europe as early as 1640, on account of its having cured the Countess of Chinchon of a fever. We are ignorant of its early history, and how the Spaniards in Peru became acquainted with its virtues; but the Jesuits secretly conveyed it from Peru to Spain—hence it was called the Jesuits' Bark. Little was further known of it until the time of La Condamine, who visited Peru in 1738, and after whom Humboldt and Bonpland named the plant the *Cinchona Condaminea.* It was long supposed that only one species existed; a vast number, however, have been discovered, all of which possess medicinal properties, though varying much, both according to their species and the locality of their growth.

Medicinal Properties.

Cinchona Bark is a decided tonic, with some degree of astringency. It is especially useful in fevers of a remittent and intermittent character, when it should be given, in full doses, shortly before the cold stage. It has been found highly beneficial in many chronic cases, although intermissions do not occur; chronic and pulmonary catarrh, chronic diarrhœa, and in every case of direct debility. It is the most valuable remedy in neuralgia, and one of the most reliable medicines to relieve erysipelas in convalescence from acute diseases.

Powdered Bark was used in the Franco-German war to stanch blood.

An almost white powder was sold in India as the Government Cinchona Febrifuge, which had an average percentage composition of 15·5 crystallizable Quinine, 33·5 Cinchonine, 29 Cinchonidine, 17 Amorphous Alkaloid, 5 colouring matter.

It has been suggested to mix the crystalline salts in the proportion of 4 parts of Sulphate of Quinine, 8 parts of Sulphate of Cinchonidine, 9 parts of Sulphate of Cinchonine.

The results of experiments in India proved that Sulphate of Quinidine was quite equal to Sulphate of Quinine in therapeutic value, and Sulphate of Cinchonidine very nearly so; and that Sulphate of Cinchonine, while possessing valuable febrifuge properties, was in large doses apt to cause nausea, vomiting, and derangements of the bowels, and was not quite so speedy in its action in arresting periodic fevers as the other alkaloids; that in nine-tenths of the fever cases of India, Cinchonidine is just as efficient as Quinine, and only about one-fourth of the cost.—*Cinchona Committee's Report*, 31 August, 1878.

1 part of Quinine dissolves in about 20 parts of Ether.
1 part of Quinidine dissolves in about 30 parts of Ether.

A strong solution of either of the above gives with Chlorine Water and Liquid Ammonia a green precipitate; in a dilute solution only a green coloration is produced.

1 part of Cinchonidine dissolves in about 100 parts of Ether.
1 part of Cinchonine dissolves in about 1000 parts of Ether.

Solutions of these, if pure, do not give a green precipitate or coloration with Chlorine Water and Ammonia.

CINCHONÆ RUBRÆ CORTEX.

RED CINCHONA BARK.

The dried bark of the stem and branches of cultivated plants of *Cinchona succirubra.*

Test.—When used for purposes other than that of obtaining the alkaloids or their salts, it should yield between 5 and 6 per cent. of total alkaloids, of which not less than half shall consist of Quinine and Cinchonidine, as estimated by the following methods:—

1. *For Quinine and Cinchonidine.*—Mix 200 grs. of Red Cinchona Bark, in No. 60 powder, with 60 grs. of Hydrate of Calcium; slightly moisten the powders with half an ounce of Water; mix the whole intimately in a small porcelain dish or mortar; allow the mixture to stand for an hour or two, when it will present the characters of a moist, dark-brown powder, in which there should be no lumps or visible white particles. Transfer this powder to a 6-oz. flask, add 3 fluid oz. of Benzolated Amylic Alcohol, boil them together for about half an hour, decant and drain off the liquid on to a filter, leaving the powder in the flask; add more of the Benzolated Amylic Alcohol to the powder, and boil and decant as before; repeat this operation a third time; then turn the contents of the flask on to the filter, and wash by percolation with more of the Benzolated Amylic Alcohol until the Bark is exhausted. If, during the boiling, a funnel be placed in the mouth of the flask, and another flask filled with Cold Water be placed in the funnel, this will form a convenient condenser which will prevent the loss of more than a small quantity of the boiling liquid. Introduce the collected filtrate, while still warm, into a stoppered glass separator; add to it 20 minims of Diluted Hydrochloric Acid, mixed with 2 fluid drachms of Water; shake them well together, and when the acid liquid has separated this may be drawn off, and the process repeated with Distilled Water slightly acidulated with Hydrochloric Acid, until the whole of the alkaloids have been removed. The acid liquid thus obtained will contain the alkaloids as Hydrochlorates, with excess of Hydrochloric Acid. It is to be carefully and exactly neutralised with Ammonia while warm, and then concentrated to the bulk of 3 fluid drachms. If now about 15 grs. of Tartarated Soda, dissolved in twice its weight of Water, be added to the neutral Hydrochlorates, and the mixture stirred with a glass rod, insoluble Tartrates of Quinine and Cinchonidine will separate completely in about an hour; and these collected on a filter, washed, and dried, will contain eight-tenths of their weight of the alkaloids, Quinine and Cinchonidine, which, divided by two, represents the percentage of those alkaloids. The other alkaloids will be left in the mother-liquor.

2. *For Total Alkaloids.*—To the mother-liquor from the preceding process add solution of Ammonia in slight excess. Collect, wash, and dry the precipitate, which will contain the other alkaloids. The weight of this precipitate, divided by two, and added to the percentage weight of the Quinine and Cinchonidine, gives the percentage of total alkaloids.

The above tests and the standard differ from those of B. P. 1867.

Preparations.

DECOCTUM CINCHONÆ. [ALTERED.]

Red Cinchona Bark, in No. 20 powder, 1¼; Distilled Water, 20: boil ten minutes; when cold, strain, and pour on the marc sufficient water to make up 20. =(1 in 16).

Red Bark is now used in the place of Yellow Bark.

The decoction thus made extracts only about half the active principle of the bark; the marc retains about the same quantity of Quinine as is found in the decoction. Formerly the Decoction was ordered to be strained while hot, and a large deposit fell on cooling; this deposit, however, contained only $\frac{1}{24}$ of the active part of the bark, and now, by straining when cold, this is rejected.

Dose.—1 to 2 oz.

(Belg. China fusca, 1 in 10; Russ. Cinchona fuscus, 1 in 4; also Calisaya 1 in 8, containing Sulphuric Acid; not in the others.)

EXTRACTUM CINCHONÆ LIQUIDUM. Intense reddish-brown. [ALTERED.]

Red Cinchona Bark, in No. 60 powder, 20 oz.; Hydrochloric Acid, 5 drms.; Glycerine, 2½ oz.; Rectified Spirit and Distilled Water of each a sufficiency. Mix the bark with 5 pints of the Water to which the Acid and Glycerine have been added, and macerate in a covered vessel for forty-eight hours, stirring frequently; then transfer to a percolator, and when the fluid ceases to pass, and the contents of the percolator have been properly packed, continue the percolation with Water until 15 pints of liquid have passed, or that which is passing has ceased to give a precipitate on the addition to it of an excess of solution of Soda. Evaporate the percolated liquid in a porcelain or enamelled iron vessel at a temperature not exceeding 180° F. (82°·2 C.) until it is reduced to 20 fluid ounces.

Put 50 fluid grains of this liquid (*a*) with half an ounce of Distilled Water into a stoppered glass separator capable of holding 4 fluid ounces; add to this 1 fluid ounce of Benzolated Amylic Alcohol and half a fluid ounce of solution of Soda, shake them together thoroughly and repeatedly, then allow them to remain at rest until the spirituous solution of the alkaloids shall have separated and formed a distinct stratum over the dark-coloured alkaline solution of the other constituents of the extract. Run off the latter by the stopcock, add a little more Distilled Water to wash away any still adhering alkaline solution from the separator and its contents, and having run off this as before, as completely as possible, decant the spirituous solution into a small porcelain or glass dish the weight of which is known. Evaporate by the heat of a water bath until a perfectly dry residue is left. The weight now of the dish and its contents, after deducting the known weight of the dish, will give that of the alkaloids, and this multiplied by 2 will give the parts by weight of the alkaloids in 100 fluid parts of the liquid (*a*).

Having thus ascertained the alkaloidal strength of the liquid (*a*), every fluid part of it containing five grains of total alkaloids is first to be brought to the volume of eighty-five grains by evaporation, or if necessary by dilution with water, then 12·5 fluid grains of Rectified Spirit are to be added, and the final adjustment of the volume to 100 fluid grains is to be effected by the addition of Distilled Water. The finished liquid extract will thus contain five grains of the alkaloids of the bark in every 100 fluid grains.

The preparation of this has been entirely altered.

Dose.—5 to 10 minims.

Contains total alkaloids 5 per cent.

1 part of this extract is equal to about 1 of Bark.

(U.S. Cinch. Flava, 1 in 1, contains 25 p. c. of Glycerine; not in the others.)

INFUSUM CINCHONÆ ACIDUM. [NEW.]

Red Cinchona Bark, in No. 40 powder, 1; Aromatic Sulphuric Acid, ¼; boiling Distilled Water, 20: infuse one hour, and strain. =(1 in 20).

This replaces the old Infusion made with Yellow Bark without acid.

Dose.—1 to 2 oz.

This is cleaner on the palate than the Decoction.

(U.S. (C. Flava), 6 in 100, with Aromatic Sulphuric Acid; Fr. (Tisane), 1 in 50; not in the others.)

TINCTURA CINCHONÆ. Deep reddish-brown. [ALTERED.]

Red Cinchona Bark, in No. 40 powder, 4; Proof Spirit, 20; macerate forty-eight hours with 15 of the spirit, agitating occasionally, pack in a percolator and let it drain, then pour on the remaining spirit, and when it ceases to drop, press, and add sufficient proof spirit to make 20. =(1 in 5).

Red Bark is now used in the place of Yellow.

Dose.—½ to 2 drms.

(Belg. Tinctura Chinæ, Tinct. Chinæ Flavæ, Tinct. Chinæ Rubræ; Dan. Tinctura Chinæ Calisayæ; Fr. Teinture de Quinquina, Gris, Jaune, also Rouge; Ger. Tinctura Chinæ (from any species); Russ. Tinctura Chinæ (from China fusca); U.S. Tinctura Cinchona (from Cinchona Flava): all 1 in 5 and by weight; not in Austr.

TINCTURA CINCHONÆ COMPOSITA. Deep red; deposits slightly.

Red Cinchona Bark, in No. 40 powder, 4 oz.; Bitter Orange Peel, cut small and bruised, 2 oz.; Serpentary, bruised, 1 oz.; Saffron, 110 grains; Cochineal, 56 grains; Proof Spirit, 40 oz.; macerate forty-eight hours with 30 oz. of the spirit, agitating occasionally, pack in a percolator and let it drain, then pour on the remainder of the spirit; when it ceases to drop, press, and add sufficient proof spirit to make up 40 oz. =(1 in 10).

Dose.—½ to 2 drms.

(U.S. with Red Bark; Dan. Belg. Ger. and Russ. Tinct. Chinæ Comp. (Tinct. Whyttii), with Cinchona, Gentian, Orange Peel, and Cinnamon (various strengths); not in Austr. or Fr.)

Not Official.

Quill Red-Cinchona Bark 16 ounces, digested and afterwards percolated with a sufficient quantity of equal parts Rectified Spirit and Distilled Water, the percolate evaporated to 7½ fl. oz., and ½ fl. oz. Rectified Spirit added to make 8 fl. oz. This preparation has been largely used by dypsomaniacs, but in *Brit. Med. Jl.*, April 24, p. 646, and *Lancet*, June 12, 1880, p. 938, its use is discouraged.

INFUSUM CHINÆ FRIGIDE PARATUM (Russ.). Powder of Red Bark, 18; Distilled Water, 144; Phosphoric Acid (sp. g. 1·130), 1.

(Huxham's Original Formula for Tincture of Bark in 1788.)

Powdered Peruvian Bark, 4 oz.; Orange Peel, 3 oz.; Serpentary Root, 80 grs.; Saffron, 160 grs.; Cochineal, 80 grs.; Brandy, 40 oz.; digest 3 or 4 days.

CINCHONIDINÆ SULPHAS.

SULPHATE OF CINCHONIDINE.

$(C_{20}H_{24}N_2O)_2, H_2SO_4, 3H_2O$, eq. 768.

[NEW.]

The sulphate of an alkaloid obtained from the bark of various species of Cinchona. It may be obtained from the mother-liquors of the crystallisation of Sulphate of Quinine by further concentration, purified by crystallisation from alcohol, and finally from hot water.

Colourless silky crystals, usually acicular.

It loses 7 per cent of moisture on drying at 212° F. (100° C.)

Soluble, 1 in 100 of Water; 1 in 4 of boiling Water; 1 in 60 of Rectified Spirit; sparingly in Chloroform; very sparingly in Ether.

Tests.—It dissolves in pure Sulphuric Acid with production of not more than a faint yellow coloration, and the fluid undergoes no apparent change when gently warmed. It leaves no ash on ignition; it twists a ray of polarised light to the left. An aqueous solution has a neutral or faintly alkaline reaction; it gives with solution of Tartarated Soda a white precipitate, the filtrate from which is rendered not more than slightly turbid with solution of Ammonia.

Medicinal Properties.

Similar to Quinine but not so powerful.

Dose.—1 to 10 grains.

CINCHONINÆ SULPHAS.

SULPHATE OF CINCHONINE.

$(C_{20}H_{24}N_2O)_2, H_2SO_4, 2H_2O$, eq. 750.

[NEW.]

The sulphate of an alkaloid obtained from the bark of various species of Cinchona and Remijia. It may be obtained from the mother-liquors of the crystallisation of the Sulphates of Quinine, Cinchonidine and Quinidine by precipitating the alkaloid with Caustic Soda, washing it with spirit until free from other alkaloids, dissolving in Sulphuric Acid, and after purifying the solution with Animal Charcoal, allowing to crystallise.

Hard short prismatic crystals.

It loses 5 per cent. of moisture on drying at 212° F. (100° C.)

Soluble, 1 in 70 of Water; 1 in 17 of boiling Water; 1 in 9 of Rectified Spirit; 1 in 60 of Chloroform; very sparingly in Ether.

Tests.—It dissolves in pure Sulphuric Acid without change of colour, and the solution undergoes no apparent change when gently warmed. When 25 grains of the salt is dried at 212° F. (100° C.) it should almost wholly dissolve in 4 oz. by weight of Chloroform. It leaves no ash on ignition and twists a ray of polarised light to the right. An aqueous solution has a neutral or faintly alkaline reaction.

Dose.—1 to 10 grains.

CINNAMOMI CORTEX.

CINNAMON BARK.

The inner bark of shoots from the truncated stocks or stools of the cultivated *Cinnamomum Zeylanicum*, imported from Ceylon, and distinguished in commerce as Ceylon Cinnamon.

The ash was determined of Cortex and Pulvis Cinnamomi: Cortex (3 samples) 4·26, 4·02, 3·43 per cent.; Pulvis (4 samples) 4·61, 4·8, 5·07, 4·44 per cent.

Medicinal Properties.

Warm and cordial to the stomach, carminative and astringent, chiefly used as an adjuvant to other medicines. Often employed in diarrhœa, with chalk. Efficacious in internal hemorrhage.

Dose of the powder, 10 to 20 grs.

(In all the Pharmacopœias except Ger. (which uses Cassia); Fr. Cannelle.)

Contained in Decoctum Hæmatoxyli, Infusum Catechu, Pulv. Catechu Co., Pulv. Cretæ Aromaticus, Pulv. Kino Compositus, Tinct. Cardam. Co., Tinct. Catechu, Tinctura Lavandulæ Comp., Vinum Opii.

Preparations.

AQUA CINNAMOMI.

Cinnamon Bark, bruised, 1; Water, 16: distil 8. =(1 in 8).

Dose.—1 to 2 oz.

(Austr. Belg. Dan. Ger. and Russ. 1 in 10; Fr. Eau de Cannelle, 1 in 4; U.S. made with oil 1 in 500.)

OLEUM CINNAMOMI. Yellowish when recent, gradually becoming red.

The oil distilled from Cinnamon bark.

Sp. g. (several samples taken) 1·022—1·043.

Soluble, 10 in 3 of Rectified Spirit; 1 in 45 of Proof Spirit.

Test.—4 drops dissolved in 2 drs. of Alcohol becomes greenish-blue on adding 1 drop of solution of Ferric Chloride; Oil of Cassia gives a brown colour, and after a short time becomes cloudy.

Possesses the carminative qualities of Cinnamon without its astringency.

Dose.—1 to 4 minims in pill, with powdered Mastic, or in sugar, or emulsion.

(Austr.; Belg. (Essentia); Dan.; Fr. (Huile Volatile de Cannelle; Ger. (use Cassia); Russ.; and U.S.)

PULVIS CINNAMOMI COMPOSITUS. Dark fawn.

Cinnamon bark, 1; Cardamom seeds, 1; Ginger, 1, all in powder: mix. =(1 in 3).

Dose.—3 to 10 grs.

(Called Pulvis Aromaticus in the foreign Pharmacopœias. Belg. same as Brit.; U.S. Cinnamon 7, Ginger 7, Cardamoms 3, Nutmeg 3; Russ. Cinnamon 4, Cloves, Mace, Nutmeg, Ginger, of each 1; not in the others.)

SPIRITUS CINNAMOMI. [NEW.]

Oil of Cinnamon, 1; Rectified Spirit, 49: dissolve. =(1 in 50).

Sp. g. about 0·839.

Dose.—1 to 2 drms.

TINCTURA CINNAMOMI. Deep brown. [ALTERED.]

Cinnamon bark, in coarse powder, 1; Rectified Spirit, 8: macerate forty-eight hours with 6 of the spirit, agitating occasionally, pack in a percolator and let it drain, then pour on the remaining spirit; when it ceases to drop, press, and add sufficient Rectified Spirit to make up 8. =(1 in 8).

This now made with Rectified instead of Proof Spirit.

Dose.—½ to 2 drms.

(Austr. Belg. Dan. Fr. Ger. and Russ. 1 in 5; U.S. 1 in 10; all by weight.)

COCA.

COCA.

[NEW.]

The leaves of *Erythroxylon Coca*, dried, from Bolivia. They resemble the leaves of tea, but have a slightly visible curved line on each side of the midrib.

They are chewed by the natives to sustain them during the day, that they may defer eating till the evening. The author has been presented with some of it by Dr. Sieveking, and it has been tried, but the reports from the several experimenters in this country are not promising; it is said to produce a gentle exciting effect, with a disposition to sleep, not followed by languor or depression.

Now included in B. P.; was a Not Official in Companion 1874.

An extract is made from the fresh plant and imported into this country.

(Fr. Coca; U.S. Erythroxylon; not in Austr. Belg. Dan. Ger. or Russ.)

Preparation.

EXTRACTUM COCÆ LIQUIDUM. [NEW.]

Macerate 20 of Coca, in No. 40 powder, with 40 of Proof Spirit for forty-eight hours, pack in a percolator and let it drain, continue the percolation with more of the Spirit until the Coca is exhausted; reserve the first 15 of the percolate, and evaporate the remainder by a water bath to the consistence of a soft extract, dissolve this in the reserved portion, and add sufficient Proof Spirit to make 20.=(1 in 1).

Dose.—½ to 2 drs.

(U.S. same as Brit.; not in the others.)

French Codex has solid Extract, Tincture 1 in 5, Tisane 1 in 100, Vinum 6 in 100.

COCAINÆ HYDROCHLORAS.

HYDROCHLORATE OF COCAINE.

$C_{17}H_{21}NO_4, HCl$. eq. 339·5.

[NEW.]

The Hydrochlorate of an alkaloid obtained from the leaves of *Erythroxylon Coca*.

It may be obtained by agitating with Ether an aqueous solution of an acidulated alcoholic extract, made alkaline with Carbonate of Sodium; separating and evaporating the ethereal liquid, purifying the product by repeating the treatment with acidulated Water, Carbonate of Sodium, and Ether; decolorising, neutralising with Hydrochloric Acid, and recrystallising.

Almost colourless acicular crystals or crystalline powder.

Solubilities, 2 in 1 of Water; 1 in 2½ of Rectified Spirit; 1 in 2½ of Glycerine; almost insoluble in Ether; insoluble in Fixed Oils.

Tests.—It dissolves without colour in cold concentrated acids, but chars with hot Sulphuric Acid. It leaves no residue on ignition. Its aqueous solution dilates the pupil of the eye; it has a bitter taste, producing on the tongue a tingling sensation, followed by numbness; it gives a yellow precipitate with Chloride of Gold, a white precipitate with Carbonate of Ammonium, soluble in excess; it should yield little or no cloudiness with Chloride of Barium or Oxalate of Ammonium.

Medicinal Properties.

Has been largely used for producing anæsthesia in examinations of and operations on the throat and eye; 20 per cent. solutions being used for the throat, and 2 to 4 per cent. for the eye. The solutions should always be freshly prepared to avoid the formation of a fungus which has been found in stale solutions, and which has produced injurious effects. It has also been used for producing anæsthesia of other portions of the mucous membrane, as the rectum, urethra, vagina, ear, and nose. It has been used successfully as a preventive of sea-sickness, in doses of $\frac{1}{4}$ to 1 grain in solution.

B. P. Dose.—$\frac{1}{5}$ to 1 grain.

Preparation.

LAMELLÆ COCAINÆ. [NEW.]

Discs of Gelatine with some Glycerine, each weighing about $\frac{1}{30}$ grain and containing $\frac{1}{200}$ grain of Hydrochlorate of Cocaine.

Used in ophthalmic surgery.

Not Official.

COCAINE. Crystallises in colourless prisms.

Solubility, about 1 in 800 of Water; 1 in 10 of Rectified Spirit; 1 in 12 of Olive Oil; 2 in 1 of Chloroform; 1 in 4 of Ether; 1 in 14 of Oil of Turpentine. Insoluble in Glycerine.

COCCUS.

COCHINEAL.

The female insect, *Coccus Cacti*, dried; reared on *Opuntia Cochinillifera*, and on other species of *Opuntia*, in Mexico and Teneriffe.

(U.S. Coccus; Belg. Dan. and Russ. Coccionella; Fr. Cochenille; not in Austr or Ger.)

Medicinal Properties.

Anodyne, given in whooping cough.

Preparations.

TINCTURA COCCI. Lake colour.

Cochineal, in powder, 1; Proof Spirit, 8: macerate seven days, agitating occasionally; strain, press, filter, and add sufficient proof spirit to make 8. =(1 in 8).

Dose.—30 to 90 minims twice a day. (Used chiefly for colouring medicines.)

(Fr. 1 in 10; by weight; not in the others.)

Not Official.

MIXTURE FOR WHOOPING COUGH.—Cochineal, 10 grs.; Carbonate of Potassium, 20 grs.; Sugar, $1\frac{1}{4}$ oz.; Water, 4 oz.: rub together and strain.

Dose.—15 minims four times a day for a child one year old; 30 minims, two years; 60 minims, four years.

Boiled apples in milk given for the food.

CARMINE, prepared from Cochineal, an excellent colouring agent for powders and ointments.

CODEINA.

CODEINE.

$C_{18}H_{21}NO_3, H_2O$, eq. 317.

[NEW.]

An alkaloid contained in Opium and separated from the ammoniacal liquors from which Morphine has been obtained by evaporating, treating the residue with water, precipitating with Caustic Potash and purifying the precipitated alkaloid by recrystallisation from Ether. Colourless or nearly colourless octohedral crystals; its aqueous solution has an alkaline reaction and a bitter taste.

Now included in B. P.; was in Companion 1864.

Solubility, 1 in 80 of Water; 1 in 24 of boiling Water; 1 in 2 of Rectified Spirit; 1 in 2 of Chloroform; 1 in 30 of Ether; 1 in 12 of Benzol.

Tests.—It dissolves in Sulphuric Acid, forming a colourless solution which when gently warmed with Molybdate of Ammonium or a trace of Perchloride of Iron assumes a deep blue colour. Moistened with strong Nitric Acid it becomes yellow, but not red. Yields no ash on ignition.

(Belg. Fr. Ger. Russ. and U.S.; not in Austr. or Dan.)

Medicinal Properties.

It has been given with benefit in diabetes (an entire abstinence of starchy food being strictly observed) in doses of 1 gr. three times a day, gradually raised to 2 grs. It has also been given in chronic laryngitis.

Dose.—¼ to 2 grs.

Not Official.

SYRUPUS CODEINÆ.—Codeine, 8 grs.; Water, 1 oz.; Syrup, 7 oz.: triturate the Codeine with the Water, add the Syrup and heat over a water bath until solution takes place, and make up with water to 8 oz.

Dose.—1 to 2 teaspoonfuls for a cough.

CODEINE PASTILLES.—Jujubes containing ⅛th grain of Codeine in each. One for a dose when the cough is troublesome.

An improvement on Codeine Jelly.

COLCHICI CORMUS.*

COLCHICUM CORM.

The fresh corm of *Colchicum autumnale* (collected about the end of June or early in July), stripped of its coats, sliced transversely, and dried at a temperature not exceeding 150° F. (65°·5 C.).

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* It is biennial. The young corm (an offset of the old one) first appears about the end of June, it flowers late in autumn, the impregnated germen remains latent under ground quite close to the bulb until the following spring, when the capsule rises above the surface, accompanied by several long upright leaves, the seeds ripening in June; after which the leaves decay. The corm is considered to be most active when it is a year old, that is about July.

Test.—Best tested by its bitterness.

Medicinal Properties.

Produces increased action of some of the secreting organs: the action of the skin is also increased; that of the heart diminished. Employed chiefly in gout, possessing a power of controlling the pain and inflammation. Affords relief in acute rheumatism and other inflammatory affections. May be used combined with other purgatives in cases of imperfect action of the liver. It has also been used in dropsy. It is apt to produce depression if given on an empty stomach. The Acetic Extract is frequently prescribed with Dover's Powder to relieve painful gout.

In very large doses Colchicum is a powerful stimulant of the liver and intestine. It renders the bile more watery, but increases the secretion of biliary matter proper.—Dr. Rutherford.

Dose of the powder, 2 to 8 grs. every 4 or 6 hours.

(Fr. and U.S.; not in Austr. Belg. Dan. Ger. or Russ.)

INCOMPATIBLES.—Tincture of Iodine, Guaiacum, and all astringent preparations.

ANTIDOTES.—In case of poisoning with Colchicum, emetics followed by demulcent drinks, and, if coma be present, Brandy, Ammonia, Coffee, and other powerful stimulants may be given. Hypodermic injection of ½ gr. of Morphine.

Preparations.

EXTRACTUM COLCHICI. Dark brown.

The expressed juice of fresh Colchicum Corms (deprived of their coats), cleared of deposit, heated to 212° F. (100° C.), strained, and evaporated to a pill consistence at a temperature of 160° F. (71°·1 C.)

100 pounds of Corms yield 4 pounds of Extract.

Dose.—½ to 2 grs.

(Not in the other Pharmacopœias. Belg. and Fr. Alcoholic Extract of Seeds; U.S. Fluid Extracts of Corms and Seeds.)

EXTRACTUM COLCHICI ACETICUM. Dark brown, with pungent odour.

Crushed fresh Corms, previously peeled, 112; Acetic Acid, 6: stir together, press, and after subsidence heat the clear liquor to 212° F. (100° C.), strain through flannel, and evaporate at 160° F. (71°·1 C.) to a soft extract.

100 pounds of Corms yield about 5 pounds of Extract.

Dose.—½ to 2 grs., in pill, with an equal weight of Liquorice Powder.

(U.S.; not in the others.)

VINUM COLCHICI. Light brown, deposits much.

Colchicum Corms, sliced, dried, and reduced to No. 20 powder, 4; Sherry, 20; macerate seven days, agitating occasionally, strain, and add Sherry to make 20. =(1 in 5).

(U.S. 1 and 2·5 Sherry; Fr. 1 and 10 Malaga; the following are made with the Seeds:—Austr. 1 and 5 Malaga; Belg. 1 and 6·6 Malaga and Spirit; U.S. 15 in 100 Sherry; Dan. Ger. and Russ. 1 and 10 Sherry; Fr. 1 and 16·6 Malaga.)

Dose.—10 to 30 minims.

Not Official.

MISTURA COLCHICI.—Wine of Colchicum, 20 mins.; Carbonate of Magnesia, 10 grs.; Pimento Water, to 1 oz. *Dose*, 1 oz.—*London Ophthalmic.*

COLCHICI SEMINA.

COLCHICUM SEEDS.

The seeds, carefully dried, of *Colchicum autumnale*, when fully ripe (gathered about the end of July or beginning of August).

Medicinal Properties.

Similar to those of the corm, but considered by some to be superior both in certainty of effect and mildness of operation.

(Austr. Belg. Dan. Fr. Ger. Russ. and U.S.)

Preparations.

TINCTURA COLCHICI SEMINUM. Light brown.

Colchicum Seeds, finely comminuted, 1; Proof Spirit, 8: macerate forty-eight hours with 6 of the spirit, agitating occasionally, pack in a percolator, and let it drain, then pour on the remainder of the spirit; when it ceases to drop, press, filter, and add sufficient proof spirit to make 8. =(1 in 8).

Dose.—10 to 30 minims.

(Austr. Belg. and Fr. 1 and 5; Dan. Ger. and Russ. 1 and 10; U.S. 15 in 100: all by weight.)

Not Official.

MISTURA COLCHICI.—Tincture of Colchicum Seeds, 15 minims; Bicarbonate of Potash, 10 grs.; Pimento Water, to 1 oz.—*London Hospital.*

MISTURA COLCHICI APERIENS.—Tincture of Colchicum Seeds, 15 minims; Carbonate of Magnesia, 6 grs.; Sulphate of Magnesia, 30 grs.; Peppermint Water, to 1 oz.—*University Hospital.*

TINCTURA COLCHICI COMPOSITA.—Colchicum Seeds, bruised, 1; Aromatic Spirit of Ammonia, 8: macerate for seven days, then press and strain.

Dose.—15 to 30 minims.

VINUM SEMINUM COLCHICI (Dan. Ger. and Russ.).—Seeds, 1; Sherry, 10: digest eight days.

Dose.—20 minims.

TINCTURA COLCHICI FLORUM.—Fresh Flowers, 2; Rectified Spirit, by weight, 1: digest seven days.

Dose.—10 to 30 minims. This preparation closely resembles the Eau Médicinale, and is considered by some medical men to be the most effective preparation of any.

COLLODIUM.

COLLODION.

Pyroxylin, 1; Ether, 36; Rectified Spirit, 12: mix the ether and spirit, and add the pyroxylin. In a few days decant the clear solution.

(Belg. Pyroxylin 1, Ether 20, Rectified Spirit 2½, Castor Oil 1½; Dan. Ger. and Russ. Pyroxylin 1, Ether 21, Rectified Spirit 3; Fr. Pyroxylin 1, Ether 15, Spirit 4; U.S. Pyroxylin 4, Ether 70, Rectified Spirit 26; all by weight.)

Insoluble in Water or Rectified Spirit.

Tests.—Colourless and highly inflammable, with ethereal odour; it dries rapidly upon exposure to the air, and leaves a thin transparent film. Poured on the skin, contracts in drying.

Preparations.

COLLODIUM FLEXILE. Colourless.

Collodion, 6 oz.; Canada Balsam, ¼ oz.; Castor Oil, 1 drm.: mix.

Applied to burns, ulcers, and abrasions of the skin.

It does not contract in drying.

(Fr. Collodion Élastique, Collodion 15, Castor Oil 1; Ger. Collodium Elasticum, Collodion 49, Castor Oil 1; Russ. Collodion 50, Castor Oil 1; Dan. Collodion 99, Castor Oil 1; U.S. Collodion 92, Canada Turpentine 5, Castor Oil 3.)

Medicinal Properties.

Chiefly used for coating diseased or wounded parts with a protecting film. A large number of substances can be dissolved in Collodion to form medicated Collodions. Some of these are noticed under other headings.

COLLODIUM VESICANS (BLISTERING COLLODION). *See* CANTHARIS.

Not Official.

Styptic Colloid (Dr. Richardson's).—A Saturated Solution of Tannic Acid and Xyloidine or Gun-Cotton in Absolute Alcohol and Pure Ether. In the first step of the process, the Tannic Acid, rendered as pure as it can be, is treated with Absolute Alcohol, and digested in it for several days. Then the Pure Ether, also absolute, is added until the whole of the thick Alcoholic Mixture is rendered quite fluid. Lastly the Xyloidine is added until it ceases readily to dissolve. A little Benzoin may be added to give an agreeable odour to the Colloid.

It can be applied directly with a brush, or mixed with an equal quantity of ether, and used in the form of spray.

Hæmostatic Collodion. (Dr. Pavesi's.)—Collodion, 100; Carbolic Acid, 10; Tannic Acid, 5; Benzoic Acid, 5: dissolve. Is applied by means of a pencil, or by soaking strips of linen in it.

Collodium Salicylicum. *See* Acidum Salicylicum.

COLOCYNTHIDIS PULPA.

COLOCYNTH PULP.

The dried and decorticated fruit of *Citrullus Colocynthis*, freed from the seeds; imported chiefly from Smyrna, Trieste, France, and Spain.

100 parts of the finest decorticated Turkey Colocynth yielded 34 parts of pulp and 66 parts of seeds.

The ash was determined of Pulp alone, 13·98 p. c.; also Seeds alone, 2·24 p. c.; also five purchased samples of Pulvis, 6·5, 4·93, 6·3, 9·37, 12·4 p. c.

Medicinal Properties.

It is a powerful drastic hydragogue cathartic, dangerous in large doses. Used in obstinate constipation.

In large doses a powerful hepatic as well as intestinal stimulant; it renders bile more watery, but increases the secretion of biliary matter.—Dr. Rutherford.

Dose.—2 to 8 grs. Seldom prescribed alone; generally in combination, as in Pil. Coloc. Co.

(In all the Pharmacopœias; Fr. Coloquinte.)

Preparations.

EXTRACTUM COLOCYNTHIDIS COMPOSITUM. [MODIFIED.]

Colocynth pulp, free from seeds, 6; Extract of Socotrine Aloes, 12; Resin of Scammony, in powder, 4; Curd Soap, in powder, 3; Cardamom seeds, in the finest powder, 1; Proof Spirit, 160: macerate the colocynth in the spirit for four days; press out the tincture, distil off the spirit, and add to it the aloes, soap, and scammony; and evaporate by a water bath to a pilular consistence, adding the cardamoms towards the end of the process.

The product weighs 24, therefore in every 6 of Extract. Coloc. Compos. there is the power of 1½ of pulp = Simple Extract ½, Extract of Aloes 3, Resin of Scammony 1, Curd Soap ¾, Cardamoms ¼, Water ½.

Card Soap is now used in the place of Hard Soap.

Dose.—2 to 5 grs. with 2 or 3 grs. of Extract of Hyoscyamus, to prevent griping.

(U.S. Extract Colocynth 16, Purified Aloes 50, Resin Scammony 14, Cardamom 6, Soap 14; Russ. Extract Colocynth 3, Aloes 10, Scammony 8, Extract of Rhubarb 5; not in others. Austr. Belg. Dan. Fr. Ger. Russ. and U.S. have Simple Extract made with alcohol.)

PILULA COLOCYNTHIDIS COMPOSITA. [MODIFIED.]

Colocynth pulp, in powder, 1; Barbadoes Aloes, in powder, 2; Resin of Scammony, in powder, 2; Sulphate of Potassium, in powder, ¼; Oil of Cloves, ¼; Distilled Water, a sufficiency (about ¼): mix.
=(about 1 in 6).

Resin of Scammony now used in the place of Scammony.

Made with Water as directed, the pill soon becomes hard—Syrup or Glycerine would have been better.

Dose.—5 to 10 grs. (Dr. Gregory's favourite pill.)

(Fr. Colocynth in powder 10, Aloes 10, Scammony 10, Honey q.s., Oil of Cloves ·02; not in the other Pharmacopœias.)

PILULA COLOCYNTHIDIS ET HYOSCYAMI. [MODIFIED.]

Colocynth, in powder, 1; Barbadoes Aloes, in powder, 2; Resin of Scammony, in powder, 2; Sulphate of Potassium, in powder, ¼; Oil of Cloves, ¼; Extract of Hyoscyamus, 3; Distilled Water, a sufficiency: mix. =(Pil Coloc. Co. 6; Extr. Hyos. 3).

Resin of Scammony now used in the place of Scammony.

Dose.—5 to 10 grs. (Dr. Christison's favourite pill.)

(Not in the other Pharmacopœias.)

Not Official.

TINCTURA COLOCYNTHIDIS. Colocynth pulp, in coarse powder, 1; Rectified Spirit, 10.

Dose.—10 to 15 minims three times a day.

(Same as Russ.; Belg. Fruits, 1, Alcohol 5; Ger. Fruits, 1, Alcohol, 10.)

CONFECTIONES.

CONFECTIONS.

The following are now contained in the British Pharmacopœia, the formulas for which will be found under the names of the substances from which they are prepared:—

CONFECTIO OPII. 1 of powder of Opium in 40. Dose 5 to 20 grs.
CONFECTIO PIPERIS. Dose, 1 to 2 drms.
CONFECTIO ROSÆ CANINÆ. }
CONFECTIO ROSÆ GALLICÆ. } Dose, 1 drm. or more.
CONFECTIO SCAMMONII. Dose, 10 to 30 grs.
CONFECTIO SENNÆ. Dose, 1 to 2 drms.
CONFECTIO SULPHURIS. Dose, 1 to 2 drms.
CONFECTIO TEREBINTHINÆ. Dose 1 to 2 drms. for adults, 1 drm. for children.

CONII FOLIA.

HEMLOCK LEAVES.

The fresh leaves and young branches of Spotted Hemlock, *Conium maculatum* (annual), from wild British plants, gathered in June, when the fruit begins to form.

Test.—The leaf rubbed with Solution of Potash gives out strongly the odour of Conine.

Medicinal Properties.

Powerfully narcotic; anodyne, antispasmodic, and deobstruent. Used in chronic enlargement of the liver, chronic rheumatism, syphilis, neuralgic affections; allays the cough in bronchitic affections, pertussis, and phthisis. In the case of animals poisoned by Hemlock the brain is found free from engorgement, which shows that its action on that organ must be very different from the action of Opium. May be applied externally in the form of a cataplasm to ease pain, especially in cancer.

Dose.—2 to 8 grs. in powder.

Incompatibles.—Caustic Alkalies, Vegetable Acids, and Astringents.

Antidotes.—In case of poisoning by Hemlock, emetics followed by stimulants internal and external, artificial respiration long continued.

Preparations.

CATAPLASMA CONII. [ALTERED.]

Juice of Hemlock, 1 oz.; Linseed Meal, 4 oz.; boiling Water, 10 oz.: evaporate the Hemlock Juice to half its volume, add this to the Linseed Meal and water previously mixed, and stir them together.

(For 1 Cataplasm).

Note.—Juice now substituted for leaves, and evaporated to get rid of the spirit.

(In no other Pharmacopœia.)

EXTRACTUM CONII. Intense green when freshly made; gets brown by keeping.

Inspissated juice of the fresh plant, prepared as directed for Extractum Belladonnæ.

100 lbs. plant yield 50 lbs. juice = from 55 to 60 oz. extract; 100 lbs. leaves, when dried, weigh 21 lbs.

Dose.—2 to 8 grs.

(Austr. clarified juice of fresh herb evaporated; Belg. (E. Cicutæ) juice from leaves evaporated and mixed with an equal quantity of alcohol, filtered and evaporated. Dan. made from herb with dilute spirit and water; Fr. from clarified juice of fresh leaves, also alcoholic from seeds; Russ. aqueous from herb; U.S. alcoholic from seeds, also Abstractum Conii, and a fluid extract from seeds; not in Ger.)

PILULA CONII COMPOSITA. Dark olive.

Extract of Hemlock, 5; Ipecacuanha, 1; Treacle sufficient to form a mass.

Dose.—5 to 10 grs.

(Not in the other Pharmacopœias.)

SUCCUS CONII. Light brown.

Express the juice from bruised fresh leaves; to every 3 measures of juice add 1 of Rectified Spirit. Filter after seven days.

12 minims = 1 grain of extract.

Dose.—30 to 60 minims; but sometimes given in larger doses.

(Not in the other Pharmacopœias.)

VAPOR CONINÆ.—INHALATION.

Juice of Hemlock, 1 oz.; Solution of Potash, 2 drs.; Distilled Water, 2 oz.: mix.

Put 20 minims of the mixture on a sponge, in a suitable apparatus, so that the vapour of hot water passing over it may be inhaled.

(Not in the other Pharmacopœias.)

Not Official.

MISTURA CONII C. HYOSCYAMO.—Juice of Conium, 30 minims; Extract of Henbane, 3 grs.; Mucilage, 2 drms.; Water to 1 oz.—*Chest Hospital.*

LINIMENT. CONII.—Extract, 2; Rectified Spirit, 8: triturate thoroughly, and filter.

CONII FRUCTUS.

HEMLOCK FRUIT.

The fruit of *Conium maculatum*, gathered when fully developed, but while still green (about July), and carefully dried.

Green fruits now ordered in place of ripe fruits.

Medicinal Properties.

Narcotic and somewhat sedative to the circulation. Used in the same cases as Conii Folia.

Preparation.

TINCTURA CONII. Brown.

Hemlock Fruit, finely comminuted, 1; Proof Spirit, 8: macerate forty-eight hours with 6 of the spirit, agitating occasionally, pack in a percolator and let it drain, then pour on the remaining spirit; when it ceases to drop, press, mix, filter, and add sufficient proof spirit to make 8. =(1 in 8).

Dose.—20 to 60 minims.

(Belg. Tinct. Cicutæ, 1 in 5; U.S. (with Hydrochloric Acid and Alcohol), 15 in 1,000; Fr. from dried leaves, 1 in 5; not in the others.)

Not Official.

CONINE.

Syn. CICUTINE.

$C_8H_{17}N$, eq. 127.

A colourless volatile liquid alkaloid, with a characteristic penetrating odour.

It is obtained from *Conium Maculatum* by distilling the fruit with dilute Potash or Soda, and purified by redistillation. It unites with acids to form crystalline salts.

Sp. g. ·886. It boils at 336° F. (169° C.)

Soluble 1 in 100 of Water. It mixes in all proportions with Alcohol and Ether.

(Belg. Fr. and Russ.; not in Austr. Dan. Ger. or U.S.)

CONINÆ HYDROBROMAS.

A colourless crystalline salt.

Soluble 1 in 2 of Water; 1 in 3 of Rectified Spirit.

Not Official.

CONVALLARIA.

The entire plant of *Convallaria Majalis* (Lily of the Valley).

(Fr.; not in the other Pharmacopœias.)

Medicinal Properties.

It has been long employed by the Russian peasantry as a remedy for dropsy. Professor Sée considers that it may be used in all forms of heart failure, for it has none of the nauseating effects of Digitalis, nor does it exhaust the contractility of the heart and arteries. Dr. Sansom has employed it as a substitute for Digitalis, and is convinced of its action in promoting a stronger ventricular contraction, but is not yet convinced of its superiority to Digitalis.—*Brit. Med. Journal*, January 27, 1883, p. 148.

Preparation.

Extractum Convallariæ.—Extrait de Muguet (Aqueux) French Codex. Stalks and flowers of Convallaria freshly gathered and dried with one-third quantity of leaves and roots. Cut and infuse twelve hours in six times the weight of distilled water. Press, and repeat the operation. Mix the two liquors and evaporate to a soft extract. Dissolve this in sufficient cold Distilled Water. Filter and evaporate over a water-bath to the consistence of a hard extract.

Dose.—Professor Sée gave ½ to 1 gramme daily. Dr. Sansom recommends 5 to 8 grs. three times a day. Convallaria contains 2 glucosides—Convallarin, a purgative, and Convallamarin, a heart poison allied to Digitalin; the dose of the latter is ⅛ to 2 grains.

COPAIBA.

COPAIVA.

The Oleo-Resin obtained by cutting deeply or boring into the trunk of *Copaifera Langsdorffii*, and other species of Copaifera.

Chiefly from the valley of the Amazon.

A transparent liquid, varying in colour from a light yellow to a golden brown. Sp. g. ·940—·993.

Soluble (nearly clear) 1 in 1 (*or less*) of Rectified Spirit, but if more spirit be added it becomes cloudy; in all proportions of Absolute Alcohol, Ether, Benzol, and the fixed and volatile Oils; also in four times (*or less*) its bulk of Petroleum Spirit, the solution only yielding a filmy deposit on standing; also 1 in 2 (*or less*) of Glacial Acetic Acid.

Test.—When dissolved in about 20 parts of Carbon Bisulphide and a drop of a cooled mixture of equal parts of Sulphuric and Nitric Acids added, if Gurjun Balsam be present it takes a splendid violet colour, which lasts several hours.

Medicinal Properties.

Stimulant. Acts upon the mucous membrane, more particularly on that of the genito-urinary organs and of the rectum. Used in gonorrhœa and gleet. Useful in chronic bronchitis when there is excessive mucous secretion.

To be avoided in febrile states of the system.

Dose.—20 to 60 minims three times a day.

(In all the Pharmacopœias; Fr. Copahu.)

Given floating on aromatic water, or sometimes with Spirit of Nitrous Ether. A less disagreeable form is that of emulsion, prepared by rubbing the Copaiva first with mucilage, or the yolk of an egg and sugar, and then with some aromatic water.

Both Copaiva and the Oil can be rendered emulsive by trituration with mucilage. 1½ oz. of mucilage should be used for every ounce of Copaiva, and either Cinnamon or Peppermint Water, with Tinct. of Orange or Ginger, covers the unpleasant taste. The Balsam and the Oil are sometimes put into capsules.

Preparations.

OLEUM COPAIBÆ. Colourless or pale yellow.

The Oil distilled from Copaiva.

Sp. g. about ·890, but varies considerably with the age of the oil.

It has a neutral reaction.

Solubility, 1 in 20 of Rectified Spirit; nearly insoluble in Proof Spirit; mixes in all proportions with Absolute Alcohol.

Dose.—5 to 20 minims in emulsion with mucilage or yolk of egg.

(Russ. Ol. Bals. Copaivæ; U.S.; not in the others.)

Not Official.

MISTURA COPAIBÆ.—Copaiva 20 minims; Tincture of Quillaia, 20 minims; Spirit of Nitrous Ether, 30 minims; Camphor Water to 1 oz.—*London Hospital.*

PILULA COPAIBÆ.—Copaiba, 94; Magnesia, 6; mix intimately and set aside to concrete. Should the mixture not concrete in eight or ten hours, the Copaiba before use should be shaken with $\frac{1}{20}$ of its weight of Water, then the uncombined Water allowed to subside and the Copaiba poured off.

(Massa Copaiba, U.S.; Balsamum Copaibæ Solidefactum, Belg.)

RESINA COPAIBÆ.—Prepared from the Oleo-resin by distilling off the Volatile Oil. A yellowish or brownish-yellow brittle resin, with an acid reaction.
Soluble in Alcohol.

If rubbed well with double its weight of compound Almond Powder into a paste, will form an emulsion with water.

(U.S.; not in the others.)

CORIANDRI FRUCTUS.

CORIANDER FRUIT.

The ripe fruit of *Coriandrum sativum* dried; cultivated in Britain.

The ash was determined of the fruits (three samples), 4·69, 5·28, 5·74 per cent., and of Pulvis Coriandri, 5·64, 5·7, 7·79, 7·09 per cent.

Medicinal Properties.

Stimulant, aromatic, and carminative.

Dose.—20 to 60 grs.

(Austr. Belg. Dan. Fr. Russ. and U.S.; not in Ger.)

Contained in Confectio Sennæ, Mistura Gentianæ, Syr. Rhei, Tinctura Rhei, Tinct. Sennæ.

Preparation.

OLEUM CORIANDRI. Colourless.

The Oil distilled in Britain from the fruit.

Sp. g. (several examples examined) ·867—·887.

Soluble 2 in 1 of Rectified Spirit; 1 in 75 of Proof Spirit.

1 lb. of fruit yields about 42 grs. of Oil.

Used to render medicines more palatable, and prevent griping.

Contained in Syrupus Sennæ.

Dose.—1 to 4 minims in pill or emulsion.

(U.S.; not in the other Pharmacopœias.)

CREASOTUM.

CREASOTE.

A strongly refracting liquid, colourless, or very slightly yellow, with a peculiar odour. A product of the distillation of Wood Tar.

Solubility, about 1 in 300 of Water; in all proportions of Rectified Spirit, Absolute Alcohol, Ether, and Glacial Acetic Acid, but separates on the addition of water; clear with $\frac{1}{10}$th of its volume of Chloroform, Benzol, or Benzin, milky with more.

Creasote was discovered by Reichenbach, who found it in Wood Tar. It preserves animal substances from decay, from which property its name is derived.

It is to the presence of this substance that the process of smoking hams owes its efficacy.

Sp. g. 1·071. Boils about 400° F. (204°·4 C.)

Tests.—Dropped on white filtering-paper, and exposed to a heat of 212° F. (100° C.), it leaves no translucent stain. It does not coagulate Albumen or Collodion. It is not solidified by the cold produced by the mixture of Hydrochloric Acid and Sulphate of Sodium. It turns the plane of a ray of polarized light to the right, whereas Carbolic Acid does not affect polarization. It is insoluble in Glycerine, whereas Carbolic Acid is very soluble. If an equal volume of Glycerine and of Creasote be shaken together, they will afterwards separate and both be perfectly bright; if, however, Carbolic Acid be present the Glycerine is turbid; and if in sufficient quantity, the so-called Creasote is dissolved. An aqueous solution (1 per cent.), with a drop of a dilute neutral solution of Ferric Chloride, yields a green coloration, rapidly changing to reddish brown, and, unless the mixture is very dilute, gives a reddish-brown precipitate.

Medicinal Properties.

Astringent, narcotic, styptic, antiseptic, and escharotic. Given internally for chronic gonorrhœa and gleet, for arresting nausea in hysteria and pregnancy, and for obstinate sea-sickness. It has been given with advantage in malignant cholera and cholera infantium, and bleeding from the intestines. It allays thirst and craving for food in diabetes. One drachm in 15 or 20 oz. of water for a gargle in obstinate salivation. 1 drop to 1 oz. of water is injected into the bladder to obviate the putrid odour of the urine. Externally used, in the proportion of 1 drop to 1 drm. for a lotion, to eruptions of a scaly character, to burns and chilblains, to erysipelas of the face, with swelling and pain; toothache, when depending on caries, is relieved by its application.

Dose.—1 to 3 minims, diluted with weak mucilage (½ oz. to each minim); or in a pill with crumb of bread.

When prescribed in pills with Oxide of Silver, the mass will take fire unless the oxide be first mixed with some inert powder such as Kaolin.

(In all the Pharmacopœias.)

Preparations.

MISTURA CREASOTI. [ALTERED.]

Creasote, 15 minims; Glacial Acetic Acid, 15 minims; Spirit of Juniper, ½ drm.; Syrup, 1 oz.; Distilled Water, 15 oz.: mix the Creasote with the Acetic Acid, gradually add the Water, and lastly the Syrup and Spirit of Juniper. =(1 in 516).

Creasote and Glacial Acetic Acid are reduced from 16 to 15 minims.

A good mode of administering Creasote, its unpleasant taste being concealed by the Juniper.

It dissolves in the Water without the aid of the Acid.

Mucilage will render Creasote emulsive with water.

Dose.—1 to 2 oz.

(Not in the other Pharmacopœias.)

UNGUENTUM CREASOTI. Cream colour.

Creasote, 1; Simple Ointment, 8: mix. =(about 1 in 9).

(Not in the other Pharmacopœias.)

Employed in mild cases of ringworm.

VAPOR CREASOTI.—INHALATION.

Creasote, 12 minims; boiling Water, 8 oz.: mix the creasote and water in an apparatus so arranged that air may be made to pass through the solution for inhalation.

(Not in the other Pharmacopœias.)

Not Official.

AQUA CREASOTI. U.S. Creasote 1, Water 99; Austr. 1 and 100; all by weight; not in the others.

LIQUOR CARBONIS DETERGENS.—An alcoholic solution of Coal Tar as obtained from the gas-works. It is almost black, smells strongly of Naphthalene, and is of light specific gravity. Prescribed by Mr. Startin to be used externally in skin diseases in the following manner:—Liq. Carbonis Detergentis, ½ oz.; Ac. Nitric. Dil., 1 drm.; Mist. Camphoræ ad 8 oz.: to be sponged over the part affected when irritable, and afterwards to be dried off with soft linen.

MISTURA CREASOTI C. OPIO.—Creasote, 1 minim; Tincture of Opium, 2 minims; Spirit of Chloroform, 15 minims; Glycerine, 1 drm.: Water to 1 oz.—*Chest Hospital.*

CRETA.

CHALK.

Native friable Carbonate of Calcium. Used for producing Carbonic Acid Gas.

Chalk cliffs are remarkably absorbent of moisture, and cesspools even, made in the chalk, are always found dry.

In the form of whiting, chalk can be obtained in almost every house; when mixed with water to the consistence of cream, it is an excellent application for burns.

CRETA PRÆPARATA.

PREPARED CHALK.

Carbonate of Calcium, $CaCO_3$, nearly pure, eq. 100.

Chalk freed from most of its impurities by elutriation, and afterwards dried in small cones.

Insoluble in Water.

Tests.—Almost entirely soluble in Diluted Hydrochloric Acid with effervescence. This solution, when supersaturated with Solution of Ammonia, gives a copious white precipitate on the addition of Oxalate of Ammonium. The salt formed by dissolving the Prepared Chalk in Hydrochloric Acid, if rendered neutral by evaporation to dryness and then redissolved in water, gives only a very scanty precipitate on the addition of Saccharated Solution of Lime (absence, or only a trace, of Alumina, Magnesia, Ferric Oxide, or Phosphates).

Medicinal Properties.

It is astringent and antacid. Combined with other astringents and aromatics, it is used in diarrhœa accompanied with acidity. One of the best antidotes for Oxalic Acid. Has been recommended in rachitis and in scrofulous affections. Used externally to burns and ulcers.

Prescribed in powder or suspended in mucilage.

Dose.—10 to 60 grs.

(Belg. Fr. Russ. and U.S.; not in the others.)

Contained in Hydrargyrum cum Cretâ.

INCOMPATIBLES.—All Acids and Sulphates.

Preparations.

MISTURA CRETÆ.

Prepared Chalk, 1; Gum Acacia, in powder, 1; Syrup, 2; Cinnamon Water, 30: mix by trituration. =(1 in 34).

Dose.—1 to 2 oz. with astringent tinctures and opium.

(U.S. Prepared Chalk 6, Acacia 4, Sugar 10, Cinnamon Water 40, Water 40; not in the others.)

Care should be taken to use the *Prepared* Chalk, as directed; the Precipitated Chalk has a crystalline character, and is said to occasion irritation of the bowels.

PULVIS CRETÆ AROMATICUS. Dark fawn colour.

Prepared Chalk, 11; Cinnamon, 4; Nutmeg, 3; Saffron, 3; Cloves, 1½; Cardamom Seeds, 1; Refined Sugar, 25; all in powder: mix. =(about 1 Chalk in 4½).

Dose.—10 to 60 grs.

PULVIS CRETÆ AROMATICUS CUM OPIO. Dark fawn colour.

Aromatic Powder of Chalk, 39; Opium, in powder, 1: mix thoroughly and pass through a sieve. =(1 Opium in 40).

Dose.—10 to 40 grs.

Not Official.

CHOLERA MIXTURE.—Aromatic Powder, 3 drms.; Sp. Sal. Volatile, 3 drms.; Tincture of Catechu, 10 drms.; Compound Tincture of Cardamoms, 6 drms.; Tincture of Opium, 1 drm.; Chalk Mixture to make 20 oz.

This mixture was proposed by the Board of Health during the prevalence of cholera, and is useful in all cases of diarrhœa.

Dose.—1 oz. for an adult, ½ oz. for a child twelve years old, ¼ oz. for seven years old, after each liquid motion.

MISTURÆ CRETÆ COMP. c. OPIO.—Aromatic Powder of Chalk, 20 grs.; Tincture of Opium, 5 minims; Spirit of Chloroform, 20 minims; Tincture of Capsicum, 2 minims; Pimento Water to 1 oz.—*Chest Hospital.*

UNGUENTUM CRETÆ.—Prepared Chalk, 1; Spermaceti Ointment, 4: mix.

CROCUS.

SAFFRON.

The stigmas and top of the style of *Crocus sativus*, dried.

Imported from Spain, France, and Italy.

Tests.—When rubbed on the moistened finger it tinges it an intense orange-yellow. Pressed between the folds of filtering-paper it leaves no oily stain. Concentrated Sulphuric Acid instantly changes its colour to indigo-blue, which soon disappears. When added to warm water it colours the liquid orange-yellow, but should not deposit any white or coloured powder.

Medicinal Properties.

A slightly exhilarating stimulant. Useful for giving colour and flavour to official preparations.

Contained in Decoct. Aloes Comp.; Pil. Aloes et Myrrhæ; Pulvis Cretæ Aromaticus; Tinct. Opii Ammoniata; Tinct. Rhei; Tinct. Cinch. Comp.

(In all the Pharmacopœias; Fr. Safran.)

Preparation.

TINCTURA CROCI. Light brown.

Saffron, 1; Proof Spirit, 20: macerate forty-eight hours with 15 of the spirit, agitating occasionally, pack in a percolator, let it drain, and then pour on the remaining spirit; when it ceases to drop, press and add proof spirit to make 20. =(1 in 20).

Dose.—½ to 2 drms.

(Belg. 1 in 5; Dan. Fr. Ger. and Russ. 1 and 10; U.S. 1 in 10; all by weight; not in Austr.)

CROTONIS OLEUM.

CROTON OIL.

The oil expressed from the seeds of *Croton Tiglium*, a native of Hindostan, Ceylon, and the Moluccas. 100 parts of seed yield about 50 of oil.

A brownish yellow liquid. Sp. gr. ·940—·950.

Partially soluble in Rectified Spirit.

Soluble in Ether, Oil of Turpentine, and Olive Oil.

The solubility of Croton Oil in absolute Alcohol appears to depend in a great measure on the age of the oil, and the greater or less freshness of the seeds from which it was expressed; as oxidised or resinified oil dissolves the more readily.—*Pharm. Journ.*, Jan. 1865, p. 382, and March, 1878, p. 705.

Entirely soluble in Alcohol.—*Brit. Pharm.*

We find that Croton Oil dissolves Absolute Alcohol up to equal parts, but if more Alcohol be added a separation takes place.

Genuine Croton Oil can be separated by Alcohol into two parts, a soluble vesicating principle and an insoluble purgative.—*Pharm. Journ.*, Dec. 1883, p. 446.

Medicinal Properties.

A powerful hydragogue purgative, acting with great rapidity. In cases of obstinate constipation, and in apoplexy. Especially useful in dropsy following scarlet fever, in doses of ⅛ to ¼ of a drop, rubbed up with mucilage, syrup, and water. Applied externally in rheumatism, gout, neuralgia, glandular and other indolent swellings, and in laryngeal and pulmonary diseases in the form of liniment.

Is an hepatic stimulant of very feeble power.—Dr. Rutherford.

Dose.—⅓ to 1 minim.

(In all the Pharmacopœias; U.S. Ol. Tiglii.)

In pill with Crumb of Bread, or in combination with Comp. Ext. of Colocynth.

Antidotes.—In case of an overdose which acts as a violent purgative, an emetic of 20 grains of Sulphate of Zinc should be at once administered, followed by mucilaginous fluids and Opium to check the diarrhœa.

Preparations.

LINIMENTUM CROTONIS. Greenish-yellow.

Croton Oil, 1; Oil of Cajuput, 3½; Rectified Spirit, 3½: mix. =(1 in 8)

(Not in the other Pharmacopœias.)

5 minims to 1 oz. of Olive Oil are used to promote the growth of hair.

Not Official.

Croton Oil Pencils.—Croton Oil 2, Cacao Butter 1, White Wax 1: melt together the last two in a water-bath, add the oil, and when nearly cold pour into moulds.

CUBEBA.

CUBEBS.

The unripe fruit of *Piper Cubeba*, dried.

Imported from Java.

Note.—False Cubebs possessing acrid and irritant properties having been sold, the following tests should be applied: A decoction of true Cubebs, when cold, gives with solution of Iodine a bright indigo blue. Concentrated Sulphuric Acid applied to crushed Cubebs produces a deep crimson colour with a distinct carmine tint.—*Pharm. Journ.*, May, 1885, p. 909.

Medicinal Properties.

Gently stimulant, with special direction to the urinary organs. Given in gonorrhœa, most safely when the inflammation is confined to the mucous membrane of the urethra. The Essential Oil in syrup is expectorant, useful in croup, the soft membrane disappearing in a short time; useful in sore throat.

The Tincture is given with an equal quantity of Tincture of Orange to cover the taste.

Dose.—For gonorrhœa 30 to 120 grs. of the powder, wrapped in moistened wafer-paper, three or four times a day. In other cases the dose may be reduced to 10 grs.

Lozenges are made, and called bronchial troches.

(In all the Pharmacopœias.)

Preparations.

OLEO-RESINA CUBEBÆ. [NEW.]

Percolate Cubebs in coarse powder with Ether, slowly, until the liquor passes colourless. Let the Ether evaporate from the liquor, at first spontaneously and then over a water bath, or recover it by distillation; and transfer the residue to a closed vessel, letting it stand until waxy or crystalline matter ceases to be deposited. Decant the Oleo-Resin and preserve it in a well-stoppered bottle.

Dose.—5 to 30 minims.

OLEUM CUBEBÆ. Faintly green.

The Oil, distilled in Britain.

Sp. g. (several samples taken) ·907 to ·930.

Solubility, 1 in 18 of Rectified Spirit, in all proportions of Absolute Alcohol.

Dose.—5 to 20 minims, suspended in Water by means of Mucilage and Sugar.

(Belg. Russ. (sp. g. ·900—·930) and U.S. (sp. g. about ·920); not in others.)

TINCTURA CUBEBÆ. Straw colour.

Cubebs, in powder, 1; Rectified Spirit, 8: macerate forty-eight hours with 6 of the spirit, agitating occasionally, pack in a percolator, and let it drain; pour on the remaining spirit, and when it ceases to drop, press and add rectified spirit to make 8. =(1 in 8).

Dose.—½ to 2 drms.

(U.S. 1 in 10; Fr. 1 and 5; not in others.)

CUPRUM.

COPPER.

Cu, eq. 63·5.

Sp. g. 8·9: fuses about 2000° F. Copper, or Venus of the alchemists, has been employed from the earliest ages, and previous to the discovery of malleable iron was the principal ingredient in the formation of domestic utensils and instruments of war. It takes its name from the island of Cyprus, where it was wrought by the Greeks. The purest Copper is that which is deposited by electricity.

Copper wire about No. 25 gauge, or about ·02 inch, is used for preparing Spiritus Ætheris Nitrosi.

CUPRI NITRAS.

NITRATE OF COPPER.

$Cu(NO_3)_2, 3H_2O$, eq. 241·5.

[NEW.]

Deep blue prismatic crystals, very deliquescent.

With one-third of its weight of Water it forms at a temperature below 70° F. (21°·1 C.) tabular crystals, $Cu(NO_3)_2, 6H_2O$. With a very little more Water, added directly or absorbed from the air, it yields a styptic, caustic, corrosive fluid.

Solubility: 2 in 1 of Water; 2 in 1 of Rectified Spirit.

Tests.—The diluted aqueous solution is only faintly acid to Litmus; gives a maroon-red precipitate with Ferrocyanide of Potassium; affords a violet-blue solution with excess of Ammonia; and on the addition of 2 or 3 crystals of Sulphate of Iron and a few drops of Sulphuric Acid yields a black zone round the crystals.

(Not in the other Pharmacopœias.)

CUPRI SULPHAS.

SULPHATE OF COPPER.

$CuSO_4.5H_2O$, eq. 249·5.

In oblique prismatic crystals of a clear blue colour.

Solubility: 1 in 3 of Water; 2 in 1 of Water (at 212° F.); insoluble in Rectified Spirit; 1 in 2½ of Glycerine.

Tests.—An aqueous solution of the salt strongly reddens Litmus; if twice its volume of Solution of Chlorine is added, and then treated with an excess of Solution of Ammonia, it gives a violet-blue solution, leaving nothing undissolved—indicating absence of Iron and other impurities. The aqueous solution gives with Chloride of Barium a white precipitate insoluble in Hydrochloric Acid (Sulphate of Barium), and a maroon-red precipitate with Ferrocyanide of Potassium (Ferrocyanide of Copper).

Medicinal Properties.

Astringent, tonic, and emetic. Given in epilepsy and chorea. Recommended also in croup and in chronic diarrhœa. The most reliable emetic in cases of narcotic poisoning. Externally, as a styptic for bleeding surfaces and a stimulant to ulcers, as an escharotic for warts, &c. For lotions, in proportions from 2 to 4 grs. to 1 oz.; also 8 grs. to 1 oz. for prurigo genitalium. As an injection, to diminish excessive secretion from mucous membranes, especially in cases of prolapsus ani, where it affords permanent relief, the solution should be made 5 grs. to the oz. For urethral injections, 1 to 4 grs. in an ounce of water. It is also used in various affections of the eyes when astringent applications are required.

Dose.—¼ gr. gradually increased to 2 grs. three times a day, in pill, as a tonic for epilepsy; 10 grs. in 2 oz. of water as a prompt emetic in cases of narcotic poisoning.

(In all the Pharmacopœias.)

INCOMPATIBLES.—Alkalies and their Carbonates, Lime Water, Mineral Salts (except the Sulphates), Iodides, and most astringent Vegetables.

ANTIDOTES.—In case of poisoning by Sulphate of Copper, Albumen or White of Egg is the best antidote, followed by Laudanum internally, and Linseed Meal poultices applied to the abdomen.

Not Official.

LAPIS DIVINUS, Belg.—Sulphate of Copper, Nitrate of Potash, and Alum, of each equal parts, in powder, fused in a glazed earthen crucible, powdered Camphor, to the extent of $\frac{1}{30}$th part of the whole, being added near the end of the process. When cold, break in pieces and keep in a closely stoppered bottle. An eye-wash may be made of 2 grains to an ounce of distilled water.

(Fr. Pierre Divine.)

CUPRI OLEAS.—*See* OLEATES.

HAUSTUS (EMETICUS) CUPRI SULPHATIS.—Sulphate of Copper, 10 grs.; Water, 1½ oz.

COLLYRIUM CUPRI SULPHATIS.—Sulphate of Copper, 2 grs.; Water to 1 oz.—*King's College Hospital. British Skin. London.*

PILULA CUPRI COMP.—Sulphate of Copper, ¼ gr.; Opium, ¼ gr.; Confection of Roses, *q.s.*—*Fever Hospital.*

Not Official.

CURARE—WOORARA.

A powerful poison used by the Indians in the Northern part of South America for arming the points of their arrows. A brownish black shining brittle resinous mass almost wholly soluble in water, sparingly soluble in absolute alcohol. Different samples vary very much in strength, so that the dose of every parcel has to be arrived at by experiment. It is only used hypodermically, and the solution can be made by treating 1 grain Curara with 12 minims Distilled Water; let it stand for 48 hours and filter.

Dose.—$\frac{1}{16}$th to $\frac{1}{2}$ grain, but should be used with great care.

An Alkaloid Curarina has been obtained from Curara.

(Fr.; not in the other Pharmacopœias.)

CUSPARIÆ CORTEX.

CUSPARIA BARK.

Syn. ANGUSTURA BARK.

The dried bark of *Galipea Cusparia*, from tropical South America.

Two alkaloids, "Cusparine" and "Galipsine," have been extracted from Cusparia Bark. The Sulphate and Hydrochlorate of Cusparine are slightly soluble in Water, the Acetate and Tartrate much more so.—*Pharm. Journ.*, Dec. 1883, p. 433.

Test.—The inner surface touched with Nitric Acid does not become an arterial blood-red colour.

NOTE.—Strychnos Bark, for which this test was introduced, contains Brucia, which becomes blood-red by contact with Nitric Acid; but this bark is now so scarce that it is difficult to obtain even a specimen of it.

Medicinal Properties.

A stimulant tonic. Used in malignant bilious fever, intermittent fever, dysentery, and in convalescence from acute diseases. Probably more effective in warm than in temperate climates. Aromatics are generally combined with it, to prevent nausea.

Dose.—Of the powder, 10 to 40 grs.

(Belg. and Fr. Angustura; not in the others.)

Preparation.

INFUSUM CUSPARIÆ. [MODIFIED.]

Cusparia Bark, in No. 40 powder, 1; Distilled Water at 120° F. (48°·9 C.), 20: infuse one hour and strain. =(1 in 20).

Time reduced from 2 hours to 1 hour.

(Not in the other Pharmacopœias.)

Dose.—1 to 2 oz.

INCOMPATIBLES.—Mineral Acids, Perchloride of Iron, and other Metallic Salts.

CUSSO.

KOUSSO.

The dried panicles (chiefly of the female flowers) of *Hagenia abyssinica*, from Abyssinia.

Medicinal Properties.

Anthelmintic. Especially for tænia.

Dose.—$\frac{1}{4}$ to $\frac{1}{2}$ oz.

(Austr. Kousso; Belg. and Fr. Cousso; Dan. Kusso; Ger. Koso; Russ. and U.S. Brayera.)

Preparation.

INFUSUM CUSSO.

Kousso, in coarse powder, 1; boiling Distilled Water, 16: infuse fifteen minutes, without straining.

(Fr. Apozème de Cousso about 1 in 8; not in the other Pharmacopœias.)

Dose.—4 to 8 oz.

Not Official.

CYDONIUM.

QUINCE SEED.

The seeds of *Cydonia vulgaris*.

Their coriaceous envelope abounds in mucilage.

Medicinal Properties.—Demulcent. The decoction used externally for cracks in the skin. A nice neutral adjunct to eye-lotions in cases of irritation and inflammation

(Austr. Belg. Dan. Russ. and U.S.; not in Fr. or Ger.)

Decoctum.—Quince Seed, 1; Distilled Water, 80: boil over a slow fire for ten minutes, and strain.

Mucilago, by cold maceration.—Austr. 1 in 25; Belg. 1 in 100; Dan. Russ. and U.S. 1 in 50; not in Fr. or Ger.

DECOCTA.

DECOCTIONS.

The following are the Decoctions of the British Pharmacopœia (to be boiled in covered vessels), the formulas of which will be found under the names of the substances from which they are prepared:—

	Proportion of active ingredients to the whole.	Dose.
DECOCTUM ALOES COMPOSITUM	1 in 100.	½ to 2 oz.
DECOCTUM CETRARIÆ	1 in 20.	1 to 4 ,,
DECOCTUM CINCHONÆ	1 in 16.	1 to 2 ,,
DECOCTUM GRANATI RADICIS	1 in 10.	2 to 4 ,,
DECOCTUM HÆMATOXYLI	1 in 20.	1 to 2 ,,
DECOCTUM HORDEI	1 in 10.	1 to 4 ,,
DECOCTUM PAPAVERIS	1 in 10.	
DECOCTUM PAREIRÆ	1 in 16.	1 to 2 ,,
DECOCTUM QUERCUS	1 in 16.	
DECOCTUM SARSÆ	1 in 8.	2 to 10 ,,
DECOCTUM SARSÆ COMPOSITUM	1 in 8.	2 to 10 ,,
DECOCTUM SCOPARII	1 in 20.	2 to 4 ,,
DECOCTUM TARAXACI	1 in 20.	2 to 4 ,,

Decoctions not official are enumerated in the Index.

U.S.P gives a general formula for Decoctions: pour 10 of cold Water upon 1 of the substance, cover and boil for fifteen minutes, then cool to about 113° F. (45° C.), strain, and pour over the strainer enough cold Water to make the product weigh 100.

Ger.: pour cold Water upon the substances in a suitable vessel and expose for half an hour with occasional agitation to the steam from boiling Water on a water bath, and strain while still warm with expression; 10 of strained product should be obtained from 1 of substance.

U.S. and Ger. state that in Decoctions of energetic substances the strength should be specially prescribed by the physician.

Not Official.

DIGITALINUM.

The active principle obtained from Digitalis.

In porous mammillated masses or small scales, white, inodorous, and intensely bitter.

Solubility: readily in Spirit; dissolves in Acids, but does not form with them neutral compounds; almost insoluble in Water and in pure Ether.

Test.—Leaves no residue when burned with free access of air.

Dose.—$\frac{1}{60}$ to $\frac{1}{30}$ of a grain.

(Austr. Belg. Fr. and Russ.; not in the others.)

This powerful poison has been omitted from the British Pharmacopœia. It was very rarely prescribed.

DIGITALIS FOLIA.

FOXGLOVE LEAVES.

The leaves of *Digitalis purpurea* (Foxglove), gathered from wild British plants of the second year's growth, when about two-thirds of the flowers are expanded, carefully dried.

Taste very bitter and unpleasant.

(Austr. Belg. Dan. Fr. Ger. Russ. and U.S.)

Medicinal Properties.

Sedative and diuretic, useful in acute dropsy when disturbance arises from over-action of the heart. It is cumulative in action, and requires caution.

Dose.—$\frac{1}{2}$ to 2 grs. of the powdered leaf.

INCOMPATIBLES.—Sulphate and Tinct. Perchloride of Iron, preparations of Cinchona, Acetate of Lead.

ANTIDOTES.—In case of an overdose, a recumbent posture is of paramount importance; and after the stomach has been emptied, 20 grains Tannic or Gallic Acid in hot water given frequently, or hot strong tea or coffee; stimulants externally and internally should be employed.

Preparations.

INFUSUM DIGITALIS. [ALTERED.]

Foxglove leaves, dried, 28 grs.; boiling Distilled Water, 10 oz.: infuse fifteen minutes and strain. =(1 in 156).

Leaves reduced from 30 to 28 grs., and time from 1 hour to 15 minutes.

Dose.—$\frac{1}{4}$ to $\frac{1}{2}$ oz.

(Dan. 1 in 100; U.S. with Cinnamon, 3 in 200; not in the others.)

TINCTURA DIGITALIS. Dark greenish-brown.

Foxglove leaves, in No. 20 powder, 1; Proof Spirit, 8: macerate forty-eight hours with 6 of spirit, agitating occasionally, pack in a percolator, and let it drain, then pour on the remaining spirit; when it ceases to drop, press and add proof spirit to make 8. =(1 in 8).

Dose.—10 to 30 minims: but in cases of delirium tremens, 1 drm. every three hours. Two or even three drms. have been given in cases carefully watched.—*Practitioner*, Nov. 1881, p. 373, and Wood and Bache, p. 379.

(U.S. 15 in 100; Austr. Belg. and Fr. 1 in 5; Dan. Ger. and Russ. 1 and 10; Belg. and Fr. 1 Fresh herb, 1 Spirit; Fr. with Ether 1 dried herb and 5; Dan. and Russ. with Spirit of Ether 1 dried leaves and 10; all by weight.)

Not Official.

PILULA DIGITALIS COMP.—Digitalis Powder, $\frac{1}{2}$ gr.; Squill, 1 gr.; Blue Pill, 3 grs.: in one Pill. *St. George's.*

SUCCUS DIGITALIS.—The Expressed Juice, 3; Rectified Spirit, 1.

This preparation may be given for a longer period than the tincture without causing nausea.

Dose.—5 to 10 minims.

Not Official.

DUBOISIA MYOPOROIDES.

A plant indigenous in N.S. Wales and Queensland; it has been classed in the order Solanaceæ.

Dr. Ringer's experiments show that the physiological action of the extract is apparently identical with Atropine. Mr. Tweedy has used it as an application to the eye in all cases in which Atropine was indicated.—*Lancet*, March 2, 1878.

Ladenburg regards Duboisine as identical with Hyoscyamine.

The Alkaloid is so powerful that a solution (1 in 120) specially applied to the eyes often excites great giddiness, weakness, and a "drunken feel."—Ringer.

A case of poisoning by application to the eye of a solution of Sulphate of Duboisine is quoted in *Med. Times and Gaz.*, Feb. 26th, 1881, p. 247.

The Sulphate of Duboisine occurs in crystals, which are hygroscopic.

Antidotes.—The same as Atropine.

Not Official.

DUGONG OIL.

Proposed as a substitute for Cod-Liver Oil, but it is far more expensive, and its use is consequently limited; it remains semi-solid at ordinary temperatures, has scarcely any odour when perfectly fresh, and not much taste.

Not Official.

DULCAMARA.

The dried young branches of *Solanum Dulcamara* (Bittersweet), from indigenous plants which have shed their leaves.

This is now omitted from the British Pharmacopœia.

Medicinal Properties.

Narcotic. Increases the secretions, particularly of the kidneys and skin. Used in cutaneous eruptions, chiefly of a scaly nature, as lepra, psoriasis, and pityriasis, a decoction being applied externally, at the same time it is used internally. Also in chronic rheumatism and catarrh.

(Austr. Belg. Fr. (Douce-amère) and U.S.; not in the others.)

Dose.—1 to 2 oz.

Preparations.

INFUSUM DULCAMARÆ.

Dulcamara, 1; boiling Water, 10: infuse one hour.

(Fr. (Tisane), 1 in 50; not in the others.)

EXTRACTUM DULCAMARÆ FLUIDUM, U.S.

1 fl. oz. equals 1 oz. Dulcamara. Prepared with Diluted Alcohol.

ECBALII FRUCTUS.

SQUIRTING CUCUMBER FRUIT.

The fruit very nearly ripe of the Squirting Cucumber, *Ecbalium Elaterium,* from plants cultivated in Britain.

(Fr. Concombre Sauvage.)

Preparation.—Elaterium.

ELATERIUM.

ELATERIUM.

Syn. Extractum Elaterii.

A sediment from the expressed juice of the fruit of *Ecbalium Elaterium,* dried.

The fruit is cut lengthwise, the juice lightly pressed out, strained through a hair sieve, then allowed to deposit; the clear liquor being poured off, the sediment thrown on a linen strainer to drain, and lastly dried on a porous brick with a gentle heat.

In light friable flat or slightly curved opaque cakes about $\frac{1}{10}$ inch thick.

Tests.—Does not effervesce with acids; yields half its weight to boiling Rectified Spirit. Boiled with Water and the cooled mixture treated with Iodine affords little or no blue colour (absence or only a trace of Starch). Treated by the method described for Elaterin, it should yield 25 per cent., or not less than 20 per cent., of that substance.

Note.—A sample treated by this method yielded 5·75 per cent.; the same sample exhausted with Chloroform, the solution evaporated, the residue washed with Ether gave 23·5 per cent. Both products answered the test for Elaterin with Carbolic Acid equally well.

Medicinal Properties.

A powerful hydragogue cathartic. Especially used in dropsical affections connected with cardiac or renal disease. Its administration in a debilitated state of the system requires caution.

Dose.—To prevent it causing nausea, it may be given with Henbane, and is best given in doses of $\frac{1}{16}$ to $\frac{1}{2}$ gr. till it operates. Mr. Vance gave it with Gamboge in dropsy.

(Not in Austr. Belg. Dan. Fr. Ger. Russ. and U.S.)

Antidotes.—In case of poisoning with Elaterium, emollient and demulcent drinks and enemata, to be followed by small but repeated doses of Opium and the use of the warm bath.

Not Official.

Pilula Elaterii.—Elaterium, $\frac{1}{12}$ gr.; Extract of Henbane, 4 grs.: for 1 pill. (Hydragogue Pill.)—*St. Mary's.*

ELATERINUM.

ELATERIN.

$C_{20}H_{28}O_5$, eq. 348.

[NEW.]

The active principle of Elaterium. A chemically neutral substance, in small colourless crystals, which have a bitter taste. According to the Pharmacopœia, it may be obtained by exhausting Elaterium with Chloroform, adding Ether to the Chloroformic solution, collecting the precipitate, washing the latter with Ether, and purifying by recrystallisation from Chloroform.

Insoluble in Water, sparingly soluble in Rectified Spirit.

Tests.—With melted Carbolic Acid it yields a solution which, on the addition of Sulphuric Acid, acquires a crimson colour, rapidly changing to scarlet. It is not precipitated from solution by Tannic Acid, nor by the Salts of Mercury or of Platinum. Heated with access of air it first melts and then burns, leaving no residue.

Dose.—$\frac{1}{40}$ to $\frac{1}{10}$ grain.

(U.S.; not in the others.)

Preparations.

PULVIS ELATERINI COMPOSITUS. [ALTERED.]

Elaterin, 1; Sugar of Milk, 39: rub them together in a mortar until they are reduced to fine powder and intimately mixed.

Now made with Elaterin instead of Elaterium; strength is about the same as formerly.

Dose.—½ gr. to 5 grains.

(U.S. (Trituratio), Elaterin, 1; Sugar of Milk, 9; not in the others.)

ELEMI.

MANILA ELEMI.

A concrete resinous exudation, the botanical source of which is undetermined, but is sometimes referred to Canarium Commune.

It is chiefly imported from Manila.

Should have a fragrant, fennel-like odour, and is usually soft and unctuous to the touch.

The greater part is soluble in Rectified Spirit, wholly soluble in Ether.

Medicinal Properties.

Analogous to those of Turpentine. For external use only.

(Austr. Belg. Fr. and Russ.; not in Dan. Ger. or U.S.)

Preparation.

UNGUENTUM ELEMI. Cream colour.

Elemi, 1; Simple Ointment, 4: melt, strain, and stir till cold. =(1 in 5).

(Belg. and Russ. 1 of Elemi and 1 of Turpentine in 4 of Ointment; not in the others.)

It has a pleasant odour, and is used to keep open issues and setons.

EMPLASTRA.

PLASTERS.

The Emplastra of the British Pharmacopœia are as follows, the formulas for which will be found under the names of the drugs from which they are prepared:—

	Proportion of active ingredients in the mass.
EMPLASTRUM AMMONIACI CUM HYDRARGYRO	(Mercury) 1 in 5.
EMPLASTRUM BELLADONNÆ	(Alcoholic Extract) 1 in 5.
EMPLASTRUM CALEFACIENS	(Cantharides) about 1 in 25.
EMPLASTRUM CANTHARIDIS	(Cantharides) 1 in 3.
EMPLASTRUM FERRI	(Peroxide of Iron) 1 in 11.
EMPLASTRUM GALBANI	(Galbanum) 1 in 11.
EMPLASTRUM HYDRARGYRI	(Mercury) 1 in 3.
EMPLASTRUM OPII	(Opium) 1 in 10.
EMPLASTRUM PICIS	(Pitch) 1 in 2.
EMPLASTRUM PLUMBI.	
EMPLASTRUM PLUMBI IODIDI	(Iodide of Lead) 1 in 10.
EMPLASTRUM RESINÆ	(Resin) 1 in 9½.
EMPLASTRUM SAPONIS	(Soap) about 1 in 7.
EMPLASTRUM SAPONIS FUSCUM	(Soap) about 1 in 6.

Plasters which are not official are enumerated in the Index.

ENEMATA.

ENEMAS.

The following are the Enemas of the British Pharmacopœia, the formulas for which will be found under the names of the drugs from which they are prepared :—

	In each Enema.
ENEMA ALOES	40 grs. Aloes.
ENEMA ASAFŒTIDÆ	30 grs. Asafœtida.
ENEMA MAGNESII SULPHATIS	(Catharticum) 1 oz. Sulphate.
ENEMA OPII	½ drm. Tincture.
ENEMA TEREBINTHINÆ	1 oz. Oil.

John Arden, who flourished in the fourteenth century, treated largely with Clysters, and considered salt a necessary and an important ingredient.

ERGOTA.

ERGOT.

The sclerotium (compact mycelium, or spawn) of *Claviceps purpurea*, produced between the pales and replacing the grain of the common rye, *Secale cereale*.*

It has a characteristic odour, which is increased by the addition of solution of Potash.

Yields its virtues to Water and Alcohol. In percolating the powder with Ether, about one-third of its original weight of Oil is extracted.

The aqueous infusion has an acid reaction; it is precipitated by Acetate and Subacetate of Lead, Nitrate of Silver, and Tincture of Galls. With Iodine, it does not show evidence of Starch.

Ergot should be thoroughly dried and kept in closed vessels, as it has a tendency to spoil, partly by oxidation of its oil and partly by the attacks of a mite.

Medicinal Properties.

Has a special tendency to action upon the uterus in parturition when that organ has not sufficient muscular power, the os, however, being sufficiently dilated when parturition has commenced. Employed in uterine hemorrhage and floodings. Given in albuminuria. It is of service also in pulmonary hemorrhage. In amenorrhœa, if Iron be given for three weeks and the fourth week the Liquid Extract of Ergot be administered in 15-minim doses three times a day, it rarely fails to bring on catamenia in young persons. 15 minims given with 15 minims of Tincture of Henbane speedily relieve painful menstruation. 15 minims every quarter of an hour until hemorrhage ceased have been given with success in cases of epistaxis when *Liq. ferri perchlor*. and plugging had failed.—*Lancet*, Jan. 1, 1876. It is given in certain conditions of mania with advantage.

*** Ergot is common on grasses, and if it occurs in the pastures where cattle feed, it is said to occasion dry gangrene, causing the cattle to lose their hoofs and horns.**

During an epidemic of *Secale Cornutum* it was noticed that one of the symptoms of ergot poisoning was suppression of milk in lactating women. The same result followed in cows that had been fed on meal containing Ergot.—*Med. Times and Gazette*, May 29th, 1875.

Dose.—20 to 30 grs., infused in boiling water, to cause uterine contraction; 5 to 10 grs. three times a day in spinal cases.

(In all the Pharmacopœias; Austr. Belg. Dan. Ger. and Russ. Secale Cornutum; Fr. Ergot de Seigle; U.S. Ergota.)

INCOMPATIBLES.—Astringents, Metallic Salts.

Preparations.

EXTRACTUM ERGOTÆ LIQUIDUM. Intense brown. [ALTERED.]

Ergot, crushed, 16; Distilled Water, 120; Rectified Spirit, 6. Digest the Ergot in 80 of the Water for twelve hours: draw off the infusion and repeat the digestion with the remainder of the Water. Press out, strain, and evaporate the liquors by a water bath to 11, and when cold add the spirit. Allow it to stand for an hour to coagulate; filter, and make up the quantity to 16. =(1 in 1).

This is now digested cold, instead of 160° F., and the percolation with Ether is omitted; there is also less spirit used.

16 oz. of the Liquid Extract evaporated leave 2¼ ounces of solid Extract.

B. P. 1867 process yielded 10·32 per cent. of residue dried at 105° C. (221° F.); B. P. 1885 process yielded 11·46 per cent.

Dose.—10 to 60 minims.

(U.S.; not in others. Austr. Belg. Dan. Ger. and Russ. have a solid extract).

INFUSUM ERGOTÆ.

Ergot, crushed, 1; boiling Distilled Water, 40: infuse half an hour and strain. =(1 in 40).

Should be made fresh on each occasion.

Dose.—1 to 2 oz.; used also as an injection for gleet.

(Not in the other Pharmacopœias.)

TINCTURA ERGOTÆ. Intense reddish-brown.

Ergot, finely comminuted, 1; Proof Spirit, 4: macerate forty-eight hours with 3 of the spirit, agitating occasionally, pack in a percolator, let it drain, then pour on the remaining spirit; when it ceases to drop, press, filter, and make up with proof spirit to 4. =(1 in 4).

Dose.—5 to 30 minims.

(Belg. 1 and 5; Russ. 1 and 10; not in the others; U.S. Vinum, 15 in 100).

ERGOTINUM. [NEW.]

Purified Extract of Ergot, commonly called Ergotin.

Evaporate 4 of Liquid Extract of Ergot by a water bath to a syrupy consistence, and when cold mix with 4 of Rectified Spirit. Let it stand half an hour, then filter and evaporate the filtered liquid to the consistence of a soft extract.

Now included in B. P.; was a Not Official in Companion 1877.

Brit. Pharm. Dose.—2 to 5 grains.

(Austr. Belg. Dan. Fr. Ger. and Russ.; U.S. without Spirit.)

INJECTIO ERGOTINI HYPODERMICA. [NEW.]

Ergotin 100 grains; Camphor Water 200 grains: dissolve by stirring them together. =(10 in 27).

Dose.—3 to 10 minims for subcutaneous injection.

Now included in B. P.; was a Not Official in Companion 1877.

Not Official.

ACIDUM SCLEROTICUM.—An active principle, obtained from Ergot by Dragendorff. It is neither an albuminoid, alkaloid, or glucoside. It is a weak acid. It is used hypodermically $\frac{1}{3}$ to $\frac{3}{4}$ grain dissolved in Distilled Water or Thymol Water.—*P. J.*, June 1876; *Year Book Pharm.*, 1884.

Ergotinine.—An alkaloid obtained from Ergot, insoluble in Water, soluble in Alcohol or Chloroform. Used in post partum hemorrhage by hypodermic injection of 5 to 10 minims of a solution containing $\frac{1}{50}$ grain in 20 minims.—*B. M. Jour.*, Nov. 1882, p. 1004.

Not Official.

ERIGERONTIS CANADENSIS OLEUM.

OIL OF CANADA FLEABANE.

A volatile oil distilled from the fresh flowering herb *Erigeron Canadense*. A very pale yellow liquid, with neutral reaction. Sp. g. about ·900.

(U.S.; not in the others.)

Has been employed for arresting hemorrhage in the dose of 5 minims every two hours.

ESSENTIA.

Essentia Anisi.—1 Oil in 5.
Essentia Menthæ Piperita.—1 Oil in 5.

EUCALYPTI OLEUM.

OIL OF EUCALYPTUS.

[NEW.]

An oil distilled from the fresh leaves of *Eucalyptus Globulus*, *Eucalyptus Amygdalina*, and probably other species of Eucalyptus.

Colourless or pale straw-coloured, becoming darker and thicker by exposure. Neutral to Litmus.

An aromatic odour, and a spicy and pungent flavour, leaving a sensation of coldness in the mouth.

Solubility, 3 in 1 of Rectified Spirit, in all proportions of Absolute Alcohol; almost insoluble in Proof Spirit.

Sp. g. about ·900 (Brit. Pharm.).

We found at one time that sp. g. of samples varied ·881—·886, at another ·927—·935. Some samples of Eucalyptol obtained in England varied ·872—·882; but one obtained from a large distiller in Australia ·947.

The oils obtained from different sources vary slightly in their physical characters. Cloetz obtained from the leaves of the fresh plant of *Eucalyptus Globulus* $2\frac{1}{2}$ to 5 per cent. of oil, which began to boil at 170° C. (338° F.), and as the distillation proceeded the boiling point rose until above 200° C. (392° F.). The more volatile liquid after purification with Caustic Potash and fused Chloride of Calcium boiled at 175° C. (347° F.); this latter he called Eucalyptol.

(Belg. Fr. and U.S.; not in Austr. Dan. Ger. or Russ.)

Medicinal Properties.

It is a powerful antiseptic and deodorizer. It has been used in the treatment of wounds and in surgical operations; also as an inhalation in cases of diphtheria.

Not Official.

EUONYMUS.

The bark of *Euonymus Atropurpureus*.

(U.S.; not in the others.)

Preparations.

EXTRACTUM EUONYMI, U.S.

Percolate Euonymus (in No. 30 powder) with Diluted Alcohol until exhausted, distil off the Alcohol and evaporate over a water bath to a pilular consistence, lastly add 5 per cent. of Glycerine.

EUONYMIN.

An amorphous resinous powder of a brownish-green colour, obtained by precipitating a concentrated Tincture with Water.

Dose.—1 to 2 grs. in a pill.

Is a powerful hepatic, but feeble intestinal stimulant.—Dr. Rutherford.

EXTRACTA.

EXTRACTS.

The following is a complete list of the Extracts of the British Pharmacopœia, the mode of preparation for which will be found under the names of the drugs from which they are prepared :—

B. P. DOSE.	EXTRACTUM.	MENSTRUUM.
¼ to 1 gr.	ACONITI (juice of fresh herb).	
2 to 6 grs.	ALOES BARBADENSIS.	Boiling water.
2 to 6 grs.	ALOES SOCOTRINÆ.	Boiling water.
2 to 10 grs.	ANTHEMIDIS (dried flowers and oil).	Boiling water.
1 to 2 drms.	BELÆ LIQUIDUM (dried fruits).	Cold water.
¼ to 1 gr.	BELLADONNÆ (juice of fresh herb).	
1/16 to ¼ gr.	BELLADONNÆ ALCOHOLIC. (root).	Cold rectified spirit.
2 to 10 grs.	CALUMBÆ (dried root).	Proof spirit.
¼ to 1 gr.	CANNABIS INDICÆ (dried herb).	Cold rectified spirit.
2 to 8 grs.	CASCARÆ SAGRADÆ (dried bark).	Proof spirit and water.
½ to 2 drms.	CASCARÆ SAGRADÆ LIQUIDUM.	Boiling water.
3 to 30 mins.	CIMICIFUGÆ LIQUIDUM.	Rectified spirit.
5 to 10 mins.	CINCHONÆ LIQUIDUM (Red Bark).	Hydrochloric acid, glycerine, and water.
½ to 2 drms.	COCÆ LIQUIDUM (dried leaves).	Proof spirit.
½ to 2 grs.	COLCHICI (juice of fresh corms).	
½ to 2 grs.	COLCHICI ACETICUM (fresh corms).	Acetic Acid.
3 to 10 grs.	COLOCYNTHIDIS COMPOSITUM.	Proof spirit.
2 to 6 grs.	CONII (juice of fresh herb).	
10 to 30 mins.	ERGOTÆ LIQUIDUM (dried Ergot).	Cold water.
15 to 30 mins.	FILICIS LIQUIDUM (dried rhizome).	Ether.
½ to 2 grs.	GELSEMII ALCOHOLICUM (rhizome).	Rectified spirit.
2 to 10 grs.	GENTIANÆ (dried root).	Boiling water.
5 to 60 grs.	GLYCYRRHIZÆ (dried root).	Cold water.
1 drm.	GLYCYRRHIZÆ LIQUIDUM.	Cold water.
10 to 30 grs.	HÆMATOXYLI (chips).	Boiling water.
5 to 10 grs.	HYOSCYAMI (juice of fresh herb).	
2 to 10 grs.	JABORANDI (dried leaves).	Proof spirit.
5 to 15 grs.	JALAPÆ (dried root).	Spirit and cold water.
5 to 20 grs.	KRAMERLÆ (dried root).	Cold water.
5 to 15 grs.	LACTUCÆ (juice of fresh flowering herb).	
5 to 15 grs.	LUPULI (dried).	Spirit and hot water.
	MEZEREI ÆTHEREUM (dried bark).	Spirit and Ether.

DOSE.	EXTRACTUM.	MENSTRUUM.
$\frac{1}{4}$ to 1 gr.	NUCIS VOMICÆ (standardised).	Spirit and water mixed.
$\frac{1}{2}$ to 2 grs.	OPII (standardised)	Cold water.
10 to 40 mins.	OPII LIQUIDUM (standardised).	Cold water and spirit.
2 to 5 grs.	PAPAVERIS (dried capsules).	Boiling water and spirit.
10 to 30 grs.	PAREIRÆ (dried root).	Boiling water.
$\frac{1}{2}$ to 2 drms.	PAREIRÆ LIQUIDUM (extract).	Water and spirit.
$\frac{1}{16}$ to $\frac{1}{4}$ gr.	PHYSOSTIGMATIS (Calabar bean).	Cold rectified spirit.
3 to 5 grs.	QUASSIÆ (chips).	Cold water.
15 to 60 grs.	RHAMNI FRANGULÆ (dried bark).	Proof spirit and water.
1 to 4 drms.	RHAMNI FRANGULÆ LIQUIDUM.	Water and spirit.
5 to 15 grs.	RHEI (dried root).	Proof spirit and water.
2 to 4 drms.	SARSÆ LIQUIDUM (root).	Proof spirit, water (at 160° F.), and sugar.
$\frac{1}{4}$ to $\frac{1}{2}$ gr.	STRAMONII (dried seeds).	Ether and proof spirit.
5 to 30 grs.	TARAXACI (juice of fresh root).	
$\frac{1}{2}$ to 2 drms.	TARAXACI LIQUIDUM (dried root).	Proof spirit and water.

Extracts which are not official are enumerated in the Index.

Extracts are to be found in Pharmacopœias of very early date, and they are highly satisfactory preparations, as they represent very completely the properties of the plant from which they are made. They are moreover, as a general rule, well adapted for pills—a convenient form and least objectionable to the patient.

Although the extracts from the fresh medicinal plants have been so long in use, many erroneous notions have prevailed as to the best mode of making them. All previous Pharmacopœias order the *leaves* only to be employed, under the idea that the properties of the plant were most highly developed in those organs. These leaves, again, were directed to be gathered for medicinal use before the flowering of the plant. The Author, who had been occupied in this branch of pharmacy for nearly fifty years, is entirely opposed to this plan, both as to the parts employed and the time of gathering. In a paper on "Preserved Juices," read at the Pharmaceutical Society in 1841,* he stated his opinion that the plant was in the highest state of perfection when fully one-third of the flowers were blown. The main object of the growth and inflorescence of a plant is the production of seed, and the whole vital power is concentrated about the period of inflorescence for this object; at this time, therefore, is the greatest perfection to be expected. That the production of the seed requires the whole vital energy of which the plant is capable, may be seen in the fact that many plants (annuals) are unable to survive it.

In a more recent paper† he has shown that the active power resides by no means exclusively in the leaves; on the contrary, an extract prepared from the tender stalks is the more powerful. The plant selected for experiment was Belladonna, because in this case extremely accurate results could be obtained by determining the relative action of the two extracts on the eye. In consequence of these experiments, the British Pharmacopœia has ordered the tender stalks as well as the leaves for making extracts from fresh plants.

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* *Pharmaceutical Journal*, vol. i. 1841.

† Ibid. Dec. 1861.

The perfection of extracts made from fresh vegetables depends much on the attention given to them during their preparation, and to the temperature at which they are made. The lower the temperature during evaporation, the better the extract, if the time be not protracted so long as to cause some chemical change. It should be borne in mind that evaporation goes on only half as rapidly at 150° as it does at 180°, and only half at 180° as it does at 212° F. Constant agitation materially influences the rate of evaporation. When the atmosphere is warm and very dry, extracts may be made without artificial heat.

Extracts should be kept in a cool, dry place, first because a summer temperature frequently causes them to ferment, even though they may have been made with great care, and secondly because in a damp atmosphere they are apt to become mouldy.

FARINA TRITICI.

WHEATEN FLOUR.

The grain of Wheat, *Triticum sativum*, ground and sifted.

Used only for Cataplasma Fermenti.

Made into a paste with honey, is an excellent application for boils.

Bran bread and Bran biscuits, also those of Gluten, are made for the food of Diabetic patients.

Cataplasma Panis.—Grated Bread and sufficient boiling water.

Hot Bran Poultice in a flannel bag is an excellent application to injured veins.

FEL BOVINUM PURIFICATUM.

PURIFIED OX BILE.

[MODIFIED.]

Fresh Ox Bile, 20; Rectified Spirit, 10: evaporate the Fresh Ox Bile to 5, and mix it with the Rectified Spirit; agitate, and set aside for twelve hours, then decant the clear liquor, filter the remainder, washing the contents of the filter with a little more Spirit. Distil off the Spirit, and evaporate the residue over a water bath to a pill consistence.

The Ox Bile is now evaporated before adding the Spirit, which is a saving of Spirit.

Soluble in Water and in Rectified Spirit. Insoluble in Ether.

Tests.—Its watery solution gives no precipitate on the addition of Rectified Spirit. 1 or 2 grs. dissolved in about 1 drm. of Water, then treated with a drop of freshly made syrup (Sugar 1, Water 4), and then with Sulphuric Acid cautiously added until the precipitate first formed is redissolved, gradually acquires a cherry-red colour, which changes in succession to carmine, purple, and violet.

Medicinal Properties.

Tonic and laxative. Used where there is a deficiency of bile.

It is not desirable that it should come in contact with the stomach, hence it is put into capsules or in pills coated with Tolu dissolved in Ether; the latter usually preferred.

Dose.—5 to 10 grs. dissolved in milk or in pill with Aloes.

(Austr. (Fel Tauri depuratum) Gall 3, Spirit 5; Belg. (Fel Bovinum Depuratum) Dan. (Bilis bovina depurata) and Russ. (Fel Tauri Depuratum Siccum) equal weights of Gall and Rectified Spirit; U.S. (Fel Bovis Purificatum) Ox Gall concentrated and mixed with spirit; not in others. Fr. (Extrait de Fiel de Bœuf) Russ. (Fel Tauri inspissatum) and U.S. (Fel Bovis inspissatum) Gall evaporated, without purification by spirit.)

Formerly the bile was evaporated without purification, and then the dose was much larger.

8 oz. Ox Gall, diluted with 8 oz. Water and a few crystals of washing Soda, used as an enema, is sometimes useful in severe cases of intestinal obstruction.—*Lancet*, Aug. 24 and 31, 1878.

FERMENTUM.

See CEREVISIÆ FERMENTUM.

FERRUM.

IRON.

Fe, eq. 56.

Annealed iron wire, having a diameter about ·005 of an inch (about No. 35 wire gauge), or wrought iron nails free from oxide.

Sp. g. 7·8; fuses about 2786° F. The use of Iron in medicine is of great antiquity; it is said to have been the first mineral used internally, more than 3000 years ago.

Annealed Iron Wire is the purest that can be obtained, and is ordered in the Pharmacopœia for making the various preparations. Iron Filings should by no means be trusted, as they are generally full of impurities.

Medicinal Properties.

Metallic Iron would exert no action in the living system, were it not for the acid which it generally meets with in the stomach. It is given in the state of fine division, as Ferrum Redactum. The Peroxide was formerly used in the shape of Ferrum Præcipitatum, but latterly the Saccharo-Carbonate of Iron and the Ammonio-Citrate of Iron have taken its place. The Phosphates are much used, and the Tincture of the Perchloride, formerly called Sesquichloride, is still a favourite and reliable preparation; and for children the Vinum Ferri is preferred.

Of the preparations of Iron, some are astringent, and the astringent forms are pre-eminently tonic, and peculiarly well fitted to improve the quality of the blood when impoverished from any cause. Hence they are useful in diseases characterized by debility, especially in anæmia, associated with or consequent upon inordinate discharges. The diseases in which they are usually employed are chronic anæmia, dyspepsia, when dependent on deficient energy of the digestive function, and neuralgia. They are contra-indicated in acute inflammatory diseases, producing, when injudiciously employed, headache, and other symptoms, of an excited circulation.

Preparation.

MISTURA FERRI AROMATICA. Intense brown. [MODIFIED.]

Iron Wire, 2; Red Cinchona Bark, in powder, 4; Calumba, in powder, 2; Cloves, bruised, 1; Compound Tincture of Cardamoms, 12;

Tincture of Orange Peel, 2; Peppermint Water, 48: macerate the first four ingredients in the last one for three days in a closed vessel, agitating occasionally, filter, and make up with Peppermint Water to 50; to this add the tinctures, and preserve in a well-stoppered bottle.

Red Bark is now used in the place of Pale Bark.

Dose.—1 to 2 oz.

Much valued in Dublin as a tonic.

FERRI ACETATIS LIQUOR FORTIOR.

STRONG SOLUTION OF ACETATE OF IRON.

[NEW.]

Mix Solution of Ammonia 8 with Distilled Water 20, to this add gradually Solution of Persulphate of Iron 5, previously diluted with Distilled Water 20; stir the whole together, taking care that Ammonia is even finally in slight excess, as indicated by the odour of the mixture. Let the whole stand two hours, stirring occasionally; collect on calico, drain, and wash with Distilled Water until the filtrate ceases to precipitate with Chloride of Barium. Squeeze out the superfluous moisture, and dissolve the Ferric Hydrate in 3 of liquefied Glacial Acetic Acid, and make the volume up to 10 with Distilled Water.

A deep-red fluid with a sour styptic taste and acetous odour.

Note.—A similar preparation has been in the Companion as "Not Official" since 1871. It has been official in Prussian and German Pharmacopœias for many years.

Miscible with Water and Rectified Spirit in all proportions.

Sp. g. 1·127.

Test.—1 fl. drm. diluted with 2 oz. Distilled Water gives with excess of Ammonia a reddish-brown precipitate, which when washed and ignited weighs 5·7 grs.

(Ger. sp. g. 1·081—1·083; Russ. sp. g. 1·134—1·138; U.S. sp. g. 1·160; not in the others.)

Preparations.

LIQUOR FERRI ACETATIS. [NEW.]

Strong Solution of Acetate of Iron, 5; Distilled Water to make 20. =(1 in 4).

Sp. g. 1·031.

Dose.—5 to 30 minims.

TINCTURA FERRI ACETATIS. [ALTERED.]

Strong Solution of Acetate of Iron, 5; Acetic Acid, 1; Rectified Spirit, 5; Distilled Water, 9: mix, and add sufficient Distilled Water to make 20. Preserve in a stoppered bottle. (=1 in 4).

Dose.—5 to 30 minims.

This is a great improvement on the Tincture of Brit. Pharm. 1867.

(U.S. with Acetic Ether, see p. 161.)

Not Official.

Tinctura Ferri Acetici Ætherea—
  Ger. Solution of Acetate of Iron (sp. g. 1·082), 10; Alcohol, 1½; Acetic Ether, 1.
  Russ. Solution of Acetate of Iron (sp. g. 1·136), 9; Rectified Spirit, 2; Acetic Ether, 1.

U.S. Solution of Acetate of Iron (sp. g. 1·160), 10; Alcohol, 6; Acetic Ether, 4. All by weight.

Dose.—10 to 20 mins.

FERRI ARSENIAS.

ARSENIATE OF IRON.

Arseniates of Iron, with some Oxide.

A tasteless amorphous powder, of a greenish colour.

Dissolves readily in Hydrochloric Acid; insoluble in water.

Tests.—A small quantity, boiled with an excess of Caustic Soda and filtered, gives when exactly neutralized by Nitric Acid, a brick red precipitate with solution of Nitrate of Silver. The solution in Hydrochloric Acid when diluted gives no precipitate with Chloride of Barium—absence of Sulphuric Acid. 100 grains dissolved in an excess of Sulphuric Acid diluted with water continue to give a blue precipitate with the Ferricyanide of Potassium, until at least 225 grain-measures of the volumetric solution of Bichromate of Potassium have been added; that is to say, it must contain sufficient Ferrous Salt to require this quantity of Bichromate of Potassium to convert it all into Ferric Salt.

Medicinal Properties.

Administered internally in obstinate herpetic and scaly affections of the skin. Also used in lupus, elephantiasis, psoriasis, chronic eczema, and lichens. Externally in cancerous affections, mixed with four times its weight of Phosphate of Iron, as a caustic application to cancerous ulcers. From its liability to be absorbed, its use requires great caution. An ointment may be made with twelve times its weight of simple cerate.

Dose.—$\frac{1}{16}$ gr., gradually increased to $\frac{1}{2}$ gr. in pill, three times daily.

(Not in the other Pharmacopœias.)

ANTIDOTES.—*See* Acidum Arseniosum.

Not Official.

FERRI BROMIDI SOLUTIO.

Each fluid drachm contains 4½ grs. of Bromide.

Dose.—20 to 60 minims in water.

(Fr. 33 p. c.; not in the others.)

SYRUPUS.—Of the same strength and dose as the solution.

FERRI CARBONAS SACCHARATA.

SACCHARATED CARBONATE OF IRON.

Carbonate of Iron, **$FeCO_3$, xH_2O** mixed with Peroxide of Iron and Sugar, the Carbonate (if reckoned as anhydrous) forming about one-third of the mixture.

Sulphate of Iron, 2; Carbonate of Ammonium, 1¼; Boiling Distilled Water, 320; Refined Sugar, 1: dissolve the Sulphate of Iron and the Carbonate of Ammonium, each separately in one-fourth of the water, and mix thoroughly and briskly the two solutions in a deep cylindrical vessel, which is to be then covered closely; in twenty-four hours decant the supernatant liquid by a syphon, and pour the remainder of the water on the precipitate, stir well, and again syphon off the liquid when clear. Collect the deposit on a calico filter, press, and rub with the sugar in a porcelain mortar. Dry it at a temperature not exceeding 212° F. (100° C.)

The Sugar protects the Carbonate of Iron from oxidation.

Small coherent lumps of a grey-brown colour, with a sweet, very feeble, chalybeate taste.

Dissolves with effervescence in warm diluted Hydrochloric Acid.

Tests.—Its solution in Hydrochloric Acid gives but a very slight precipitate with Chloride of Barium—indicating a trace only of Sulphate. 30 grains dissolved in excess of Phosphoric Acid, and diluted with water, continue to give a blue precipitate with Ferricyanide of Potassium, until at least 287·5 grain-measures of the volumetric solution of Bichromate of Potassium have been added; that is to say, it must contain sufficient Ferrous Salt to require this quantity of Bichromate of Potassium to convert it all into Ferric Salt.

Medicinal Properties.

An excellent chalybeate; readily soluble in acids. Not astringent. Useful in anæmic amenorrhœa.

Dose.—5 to 20 grs.

(Austr. Ferrum Carbonicum Saccharatum, contains about 40 p. c. of Carbonate of Iron; Belg. and Ger. contain 20 p c.; Russ. contains 11 p. c.; U.S. contains 15 p. c.; Dan. Hydrato-carbonas Ferrosus Saccharatus; not in Fr.)

INCOMPATIBLES.—Acids and Acidulous Salts; all Vegetable Astringents.

Preparations.

MISTURA FERRI COMPOSITA. Opaque, bluish-green; best made when wanted.

Sulphate of Iron, 25 grs.; Carbonate of Potassium, 30 grs.; Myrrh, 60 grs.; Sugar, 60 grs.; Spirit of Nutmeg, 4 drms.; Rose Water, 9½ oz.

Reduce the Myrrh to powder, add the Carbonate of Potassium and Sugar, and triturate them with a small quantity of Rose Water so as to form a thin paste, then gradually add more Rose Water and the Spirit of Nutmeg, continuing the trituration and further addition of Rose Water until about eight fluid ounces of a milky liquid is formed; then add the Sulphate of Iron previously dissolved in the remainder of the Rose Water, mix thoroughly, and cork the bottle immediately.

The Spirit of Nutmeg in this formula was increased to four times the amount of Brit. 1864, because the formula in Brit. Ph. 1867 contained five times less of the Oil.

It is convenient to keep this mixture without the Iron; the addition of the Sulphate of Iron, as directed, can be made when required.

Dose.—1 to 2 oz. as a stimulating tonic.

(Dan. similar to Brit., but with three times as much Sugar; U.S. nearly same strength as Brit., but flavoured with Sp. of Lavender; not in the others.)

PILULA FERRI CARBONATIS. Black; gets hard by keeping.

Saccharated Carbonate of Iron, 4; Confection of Roses, 1: mix. =(1 in 1¼).

Dose.—5 to 20 grs., as a tonic for delicate females and children.

(Belg. Pil. Vallet.; Fr. Pilules de Carbonate Ferreux; Ger.; all are made from Sulphate of Iron, Carbonate of Soda, Honey and Sugar; U.S. with Myrrh and Syrup; not in the others.)

FERRI ET AMMONII CITRAS.

CITRATE OF IRON AND AMMONIUM.

In thin transparent scales of a deep red colour, slightly sweet and astringent in taste.

Solubility, 10 in 5 of water; 5 dissolved in 7½ of water measure 10; almost insoluble in Rectified Spirit.

Tests.—Heated with Solution of Potash, it evolves Ammonia and deposits Ferric Hydrate; the alkaline solution from which the Iron has separated does not, when slightly supersaturated with Acetic Acid, give any crystalline deposit—distinguishing it from Tartrate. When incinerated with exposure to air, it leaves about 30 per cent of Peroxide of Iron, which is not alkaline to litmus.

Medicinal Properties.

As a blood restorer it is a very effectual salt, and it possesses scarcely any astringency: it may often be given when the stomach will not bear the more astringent preparations of iron.

Dose.—5 to 10 grs.; it becomes moist if kept in paper.

(Fr. Citrate de Fer Ammoniacal; Belg. Citras Ferri; Russ. Ferrum Citricum Oxydatum Ammoniatum; U.S.; not in the others.)

In prescribing the above Salt to be taken during effervescence, care must be taken to put the Salt of Iron into the Citric Acid Solution, and not into the Bicarbonate of Potassium Solution, because if it be put into the latter, Carbonic Acid will be given off and the bottle burst. Tincture of Orange is the best flavouring agent, but prescribers are in the habit of ordering this Salt in Tincture of Orange alone, in which it will not dissolve, therefore the division into doses is impracticable. The addition of only a small quantity of water will make the solution perfect.

Incompatibles.—Mineral Acids, Vegetable Astringents, and fixed Alkalies.

Preparations.

VINUM FERRI CITRATIS. Deep brown.

Citrate of Iron and Ammonium, 160 grs.; Orange Wine, 20 oz.; dissolve, and after three days filter. =(1 gr. in each fl. drm.).

Dose.—1 to 4 drms.

(U.S. Tinct. Orange, Syrup, and Sherry, 1 in 25; Fr. Vin Chalybé 1 and 200 of Malaga; not in the others.)

Not Official.

Haustus Ferri et Ammoniæ.—Citrate of Iron and Ammonium, 8 grs.; Carbonate of Ammonium, 2 grs.; Spirit of Chloroform, 10 minims; Infusion of Quassia to 1 oz.

FERRI ET QUININÆ CITRAS.

CITRATE OF IRON AND QUININE.

Thin scales of a greenish golden-yellow colour, somewhat deliquescent, entirely soluble in cold water.

Solubility, 2 in 1 of water.

Taste bitter as well as chalybeate.

Tests.—Its aqueous solution is very slightly acid, and is precipitated reddish-brown by Solution of Soda, blue by Ferro- and Ferri-cyanide of Potassium, and greyish-black by Tannic Acid. When burned with exposure to air, it leaves a residue (Oxide of Iron) which, when moistened with water, is not alkaline to test-paper. 50 grains dissolved in an ounce of water, and treated with a slight excess of Ammonia, give a white precipitate, which, when collected on a filter and dried, weighs 7½[*] grains (Quinine); the precipitate is almost entirely soluble in a little pure Ether.

Medicinal Properties.

Astringent and tonic, combining the properties of both Iron and Quinine.

6 grains contain 1 grain of Quinine.

Dose.—5 to 10 grains as a tonic, three times a day, in solution or in pill.

(Ger. and Russ. Chininum Ferro-Citricum; U.S.; not in the others.)

INCOMPATIBLES.—Alkalies and their Carbonates, Tannic Acid, Vegetable Astringents.

Not Official.

MISTURA FERRI ET QUINIÆ EFFERVESCENS.—Citrate of Iron and Ammonia, 5 grs.; Sulphate of Quinia, 1 gr.; Citric Acid, 10 grs.; Water, 1 oz., to be taken with 10 grs. of Bicarbonate of Soda.—*Consumption Hospital.*

Not Official.

FERRI IODIDUM.

IODIDE OF IRON.

It was official in B. P. 1864 and 1867, but is now omitted in B. P. 1885. The official preparations Pilula and Syrupus are still retained.

(Belg. Dan. Ger. Russ.; not in the others).

FERRUM IODATUM SACCHARATUM.—Austr. Russ. and U.S.; 5 containing 1 of Iodide.

INCOMPATIBLES.—Acids, Acidulous Salts, Alkalies and their Carbonates, Lime Water, Vegetable Astringents.

Official Preparations.

PILULA FERRI IODIDI. Black.

Fine Iron Wire, 40 grs.; Iodine, 80 grs.; Refined Sugar in powder, 70 grs.; Liquorice Root in powder, 140 grs.; Distilled Water, 50 minims: agitate the Iron with the Iodine and the Water in a strong stoppered ounce phial, until the froth becomes white. Pour the fluid upon the Sugar in a mortar, triturate briskly, and gradually add the Liquorice.

3½ grains contain 1 gr. of the Iodide.

Dose.—3 to 8 grs.

(Belg. Dan. Fr. and U.S.; each pill contains about ¾ grain Iodine, and is coated with Bals. Tolu dissolved in Ether; not in the others.)

SYRUPUS FERRI IODIDI.

Fine Iron Wire, 1; Iodine, 2; Refined Sugar, 28; Distilled Water, 13. Make a syrup with the sugar and 10 of the water, and keep it hot. Digest the iron wire, the iodine, and 3 of water, in a flask at a gentle heat, shake them together until the froth of the mixture becomes white; add now 2 of the syrup, and boil gently for ten minutes; filter whilst still hot into the remainder of the syrup, and mix. The product should weigh about 43, or measure 31½.

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[*] B. P. 1867 and the first issue of B. P. 1885 required 8 grains, but it has since been altered by the editors of B. P. to 7½.

Sp. g. 1·385.

Each fluid drachm contains 4·3 grains of the Iodide.

(Brit. 5·7 per cent. of Iodide of Iron; Austr. 12 p. c.; Belg. and Fr. 0·5 p. c.; Dan. 10 p. c.; Ger. and Russ. 5 p. c.; U.S. 10 p. c.; all by weight).

Medicinal Properties.

It combines the properties both of Iodine and Iron, and is a most valuable tonic in the treatment of scrofulous diseases in cachectic subjects requiring Iron.

Dose.—20 to 60 minims.

Not Official.

LIQ. FERRI IODIDI.

Treat the Iodine and Iron as directed in the formula for Syrup, omit the Sugar, and add a sufficient quantity of water to make the measure up to 31½ oz.

It is the same strength as the Syrup. A coil of Iron wire must be made to traverse the whole of the column of the solution to keep it neutral.

Dose.—20 to 60 minims in a wineglassful of *cold* water; the taste is like that of water fresh from a chalybeate spring.

FERRI PERCHLORIDI FORTIOR LIQUOR.

STRONGER SOLUTION OF PERCHLORIDE OF IRON.

Perchloride of Iron, $\mathbf{Fe_2Cl_6}$, eq. 325, in solution in water.

[MODIFIED.]

Iron Wire, 4; Hydrochloric Acid, 20½; Nitric Acid, 1½; Distilled Water a sufficiency. Mix 12½ of the Hydrochloric Acid with 7 of the Water, and pour the mixture on the Iron Wire placed in a flask, applying a gentle heat until effervescence ceases; boil, then filter the solution from undissolved Iron, rinsing the flask and contents with a little Water and pouring this over the filter; and add to the filtrate 7 of Hydrochloric Acid; mix, and pour the solution in a slow continuous stream into 1½ of Nitric Acid, the evolution of red fumes being promoted if necessary by a slight application of heat. Evaporate the product until no more nitrous fumes escape and a precipitate begins to form; then add 1 of Hydrochloric Acid and sufficient Water to produce 17½ of the solution.

NOTE.—This solution is now improved by being evaporated much lower, as suggested in previous editions of the Companion; but as the sp. g. varies with the point to which the evaporation is carried, it should be evaporated to a given weight, say 12½ ounces.

An orange-brown solution, miscible with water and alcohol in all proportions. It contains 20 per cent. of Iron.

Tests.—Sp. g. about 1·42.—A fluid drachm diluted with 2 ounces of Water gives, upon the addition of an excess of Solution of Ammonia, a reddish-brown precipitate, which, when well washed and incinerated, weighs between 15 and 16 grains. A piece of Copper, boiled for a few minutes in 50 or 100 grains of this solution diluted with water, then rinsed with water, dried and heated in a dry test-tube, yields no white crystalline sublimate. Diluted with water it gives a white precipitate with Nitrate of Silver (Chloride), and blue with Ferrocyanide of Potassium (Ferric Salt), but none with Ferricyanide of Potassium (absence of Ferrous Salt).

(Austr. Belg. and Fr. sp. g. 1·260; Dan. sp. g. 1·298—1·302, and Russ. sp. g. 1·290—1·300, contain about 10 per cent. of Iron; Ger. sp. g. 1·280 to 1·283, and contains 10 per cent. of Iron; U.S. sp. g. 1·405.)

Preparations.

LIQUOR FERRI PERCHLORIDI. [MODIFIED.]

Solution of Perchloride of Iron. Of the same strength as the Tincture.

Strong solution of Perchloride of Iron, 1; Distilled Water, sufficient to produce, after admixture, 4. =(1 in 4).

Sp. g. 1·11.

Dose.—10 to 30 minims.

This preparation was introduced in order to save the expense of the Spirit used in the Tincture, which for hospital use may be worth consideration. Also it kept better than the last Tincture.

TINCTURA FERRI PERCHLORIDI. Light brown. [MODIFIED.]

Strong Solution of Perchloride of Iron, 1; Rectified Spirit, 1; Distilled Water, 2: mix, and then add sufficient Distilled Water to make 4. =(1 in 4).

Sp. g. 1·080—1·083.

Dose.—10 to 30 minims in Water.

(Dan. Solutio Chloreti Ferrici Spirituosa; Russ. Tinct. Ferri Chlorati; U.S. Tinctura Ferri Chloridi; Belg. from the Salt, with Alcohol and Ether. Not in the others.)

Medicinal Properties.

The Tincture of Iron has long been considered the most valuable of all the Iron preparations; it is given in diabetes, acting especially on the kidneys in albuminuria, the urethra in gleet, and in giving tonicity to the bladder; is slightly aphrodisiac; in passive hemorrhage and as a general tonic, having properties in common with the numerous salts of Iron; highly useful in anæmia, chlorosis, and epilepsy.

It has been given with success in acute Rheumatism.—*B. M. Journ.*, Oct. 2, 1875; May 6, 1876.

Dose.—10 to 30 minims in Water.

If given during effervescence with Bicarbonate of Sodium, 9 grains are about equal to 60 minims of Tincture.

Incompatibles.—Alkalies and their Carbonates, Glycerine, Lime Water, Carbonate of Calcium, Magnesia and its Carbonate; astringent vegetables render it black, and mucilage decomposes it.

Preparations of Iron can be given in Infusion of Quassia, or Calumba, but they tinge Infusion of Chiretta and Hops, and change to brown or black those of Chamomile, Cusparia, Gentian, Orange, Cascarilla, Cloves, Digitalis, Bark, and all astringent infusions.

LIQUOR FERRI DIALYSATUS. [NEW.]

Mix Solution of Perchloride of Iron 6 with Distilled Water 40, and stir into the mixture sufficient Diluted Solution of Ammonia to impart, after thorough agitation, a distinct ammoniacal odour. Collect the precipitated Ferric Hydrate on calico and wash it with Distilled Water, then squeeze to remove the superfluous water: add the precipitate to Solution of Perchloride of Iron 1, stir thoroughly, warm gently, and when complete or nearly complete solution is obtained filter if necessary, and place the liquid in a covered dialyser; then subject it to a stream of water in the usual manner until the solution on the dialyser is almost tasteless. The resulting solution should measure 28.

A clear dark reddish-brown liquid. Neutral to test-papers.

Sp. g. about 1·047.

Tests.—The solution gives no precipitate with Ferrocyanide of Potassium or with Nitrate of Silver, but after being heated with Hydrochloric Acid it yields with Ferrocyanide of Potassium a blue precipitate. 100 grains by weight affords a precipitate with a solution of Ammonia, which washed, dried, and ignited weighs 5 grains.

This solution, which has been submitted to dialysis (Dialysed Iron) is a solution of a highly basic Ferric Oxychloride or Chloroxyde of Iron, from which most of the acidulous matter has been removed.

Now made official, but it has been used in this country many years; we have made it for more than fifteen years.

Medicinal Properties.

It has been objected that as it is a colloid, it cannot be of use as a medicine; but it certainly is assimilated, and considering how easily the Iron is thrown out of this solution, there is no doubt that it undergoes change in the stomach.

(Ger. when Liquor Ferri Oxydati Dialysati is prescribed, Liquor Ferri Oxychlorati may be dispensed; not in the others.)

Not Official.

Liquor Ferri Chloroxydi.—A solution in water of a basic Chloride of Iron. The solution contains 5 per cent. of Ferric Oxide.

Exception has been taken to Dialysed Iron, because it has been deprived of its acid; this preparation may be considered as a medium between Liquor Ferri Perchloridi and Dialysed Iron.

Dose.—10 to 30 minims.

FERRI PERNITRATIS LIQUOR.

SOLUTION OF PERNITRATE OF IRON.

Pernitrate of Iron, $\mathbf{Fe_2 6NO_3}$, eq. 484, in solution in Water.

Fine Iron Wire, 1; Nitric Acid, 4½; Distilled Water, *q. s.*: dilute the Nitric Acid with 16 of water, dissolve the Iron (take care to moderate the action by occasionally adding part of the water), filter, and add water to make up the measure to 30.

A clear solution, of reddish-brown colour.

Tests.—Sp. g. 1·107. 1 fluid drachm treated with an excess of Solution of Ammonia gives a precipitate which, when washed, dried, and incinerated, weighs 2·6 grains. It gives no precipitate with Ferricyanide of Potassium—indicating absence of Ferrous Salt. When to a little of it placed in a test-tube half its volume of pure Sulphuric Acid is added, and then a solution of Sulphate of Iron is poured on, the whole assumes a dark-brown colour. (Test for Nitrate).

Medicinal Properties.

Tonic and astringent. Useful in chronic diarrhœa, especially when occurring in delicate and nervous females, when there are no inflammatory symptoms; also in menorrhagia; also, both internally, and as an injection in leucorrhœa, the injection being diluted so as to cause only slight heat and smarting.

Dose.—10 to 40 minims.

(U.S. Liquor Ferri Nitratis, half the strength, sp. g. 1·050; not in the others.)

FERRI PEROXIDUM HYDRATUM.

PEROXIDE OF IRON.

Syn. Ferri Sesquioxidum; Ferri Oxidum Rubrum.

Fe_2O_3,H_2O, eq. 178.

A reddish brown powder, without taste, and not magnetic.

Moist Peroxide of Iron dried at 212° F. (100° C.), and reduced to powder.

Solubility: dissolves completely though slowly with the aid of heat, in Hydrochloric Acid, diluted with half its volume of water.

Tests.—Heated to dull redness in a test tube it yields about 10 per cent. of moisture—indicating that it has not been dried at too high temperature. The solution in Hydrochloric Acid gives no precipitate with Chloride of Barium, nor with Ferricyanide of Potassium—indiindicating absence of Sulphuric Acid and Ferrous Oxide.

Dose.—5 to 30 grs.

(Russ. Ferrum Oxydatum Hydratum; Belg. Carbonas Ferri; Fr. Oxyde de Fer Anhydre; called also Crocus of Mars, Rouge.)

Preparation.

EMPLASTRUM FERRI. Chalybeate Plaster. Brownish-red. *Syn.* Empl. Thuris; Empl. Roborans.

Peroxide of Iron, in fine powder, 1; Burgundy Pitch, 2; Lead Plaster, 8: melt the pitch and plaster together, and stir in the oxide. =(1 in 11).

(U.S. similar; Fr. Emplâtre de Canet, about 1 in 5; not in the others.)

Used as a strengthening plaster, and to afford mechanical support to relaxed muscles.

FERRI PHOSPHAS.

PHOSPHATE OF IRON.

Ferrous Phosphate $Fe_3(PO_4)_2\,8H_2O$, eq. 502, at least 47 per cent.; with Ferric Phosphate and some Oxide.

A slate-blue amorphous powder. Becomes of a green hue by keeping. Soluble in acids, insoluble in water.

Tests.—When it is digested in Hydrochloric Acid with a lamina of pure Copper, a dark deposit does not form on the metal—indicating absence of Arsenic, also distinguishing it from the Arseniate of Iron. 30 grains dissolved in Hydrochloric Acid continues to give a blue precipitate with Ferricyanide of Potassium until 279 grain-measures of volumetric Solution of Bichromate of Potassium have been added—indicating nearly 47 per cent. of Ferrous Phosphate.

Medicinal Properties.

Tonic. Possesses the general properties of the ferruginous preparations. Given with advantage in amenorrhœa, some forms of dyspepsia, diabetes, and rachitis. It diminishes voracious appetite; it invigorates and increases the power of digestion.

Dose.—5 to 10 grs.

(Austr. Belg. Russ. and U.S.; not in Dan. Fr. or Ger.)

Preparations.

SYRUPUS FERRI PHOSPHATIS. [ALTERED.]

Colourless when fresh, but gets brown and deposits by keeping.

Granulated Sulphate of Iron, 224 grs.; Phosphate of Sodium, 200 grs.; Bicarbonate of Sodium, 56 grs.; Concentrated Phosphoric Acid, 1¼ oz.; Refined Sugar, 8 oz.; Distilled Water, 8 oz. Dissolve the Sulphate of Iron in 4 oz. of boiling Water, and the Phosphate of Sodium in 4 oz. of cold Water: mix the two solutions, then add the Bicarbonate of Sodium dissolved in a little water, and, after carefully stirring, transfer the precipitate to a calico filter, and wash it with Distilled Water till the filtrate ceases to be affected by Chloride of Barium; mix the residue on the filter, in a mortar with the Phosphoric Acid. As soon as the precipitate is dissolved, filter the solution, add Water and the Sugar, and dissolve without heat. The product should measure exactly 12 oz.

Each fluid drachm contains about 1 grain of anhydrous Phosphate of Iron.

This syrup now contains the full quantity of Iron ordered; Bicarbonate of Sodium is added to neutralise the Sulphuric Acid set free when solution of Sulphate of Iron and Phosphate of Sodium are mixed together. The Acetic Acid (from Acetate of Sodium) formerly dissolved a considerable amount of the precipitated Phosphate of Iron, which was thus lost. It will now contain one-third more Iron than that of the previous Pharmacopœia.

Dose.—1 to 4 drms.

(In no other Pharmacopœia.)

Not Official.

Parrish's Chemical Food.—This preparation has been made by Mr. Parrish and imported by the Author for over 20 years; a few years ago Mr. Parrish effected an arrangement to have it prepared in the Author's laboratory.

It contains Phosphate of Iron, Phosphate of Lime, Phosphate of Soda, and Phosphate of Potash.

The published formula is stated by Mr. Parrish to give a syrup containing in each fluid drachm 1 grain Phosphate of Iron, 2½ grains Phosphate of Lime, but it does not yield these quantities.

Dose.—1 to 2 drms.

Syrupus Ferri Phosphatis c. Quiniâ et Strychniâ. (Dr. Easton's formula.)—Sulphate of Iron, 300 grs.; Phosphate of Soda, 360 grs; Sulphate of Quinia, 192 grs.; Diluted Sulphuric Acid, a sufficiency; Solution of Ammonia, a sufficiency; Strychnia, 6 grs.; Diluted Phosphoric Acid, 14 oz.; White Sugar, 14 oz. Dissolve the Sulphate of Iron in 1 oz. boiling Water, and the Phosphate of Soda in 2 oz. boiling Water. Mix the solutions, and wash the precipitated Phosphate of Iron till the washings are tasteless. With sufficient Diluted Sulphuric Acid dissolve the Sulphate of Quinia in 2 oz. Water. Precipitate the Quinia with Ammonia Water, and carefully wash it. Dissolve the Phosphate of Iron and the Quinia thus obtained, as also the Strychnia, in the Diluted Phosphoric Acid; then add the Sugar and dissolve the whole, and mix without heat. The above Syrup contains about 1 gr. Phosphate of Iron, 1 gr. Phosphate of Quinia, and $\frac{1}{32}$ gr. of Phosphate of Strychnia in each fluid drachm. The dose might therefore be a teaspoonful three times a day.

The quantity of Phosphate of Soda is not sufficient to precipitate the whole of the iron.

Syrupus Ferri Phosphatis c. Manganesio.—Phosphate of Iron, 72 grs.: Phosphate of Manganese, 48 grs.; Syrupy Phosphoric Acid, 8 drms.; Syrup, 10 fl. oz.; Water, 8 drms. Rub the powders with the water, add the acid, and filter into the syrup.

Dose.—1 drm.

FERRI SULPHAS.

SULPHATE OF IRON.

$FeSO_4.7H_2O$, eq. 278.

Pale bluish-green oblique rhombic prisms, with little or no efflorescence.

Solubility, 1 in 1½ of Water: the solution rapidly oxidizes on exposure; insoluble in Alcohol and Proof Spirit, hence it cannot be dissolved in Tinctures.

Tests.—The aqueous solution gives a white precipitate with Chloride of Barium (Sulphate), one nearly white with Ferrocyanide of Potassium, and a deep blue with Ferricyanide of Potassium (Ferrous Salt), but none with Sulphurretted Hydrogen (absence of Copper and Ferric Salt). 42·1 grs. dissolved in Water acidulated with Sulphuric Acid continues to give a blue precipitate with Ferricyanide of Potassium until about 500 grain-measures of the volumetric solution of Bichromate of Potassium have been added (indicating about 100 per cent. of unoxidised Ferrous Sulphate).

Medicinal Properties.

In harmony with the properties of Iron salts in general, it is a powerful astringent, but is apt to irritate the stomach.

Dose.—1 to 5 grs. in pill, or recent solution.

(In all the Pharmacopœias.)

5 grains, with 3 grains of Sulphate of Quinine, has been given four or five times a day, for enlarged spleen.

Preparations.

FERRI SULPHAS EXSICCATA. **$FeSO_4, H_2O$**, eq. 170. Greyish cream colour.

Sulphate of Iron exposed in a porcelain or iron dish to a temperature of 212° F. (100° C.) until aqueous vapour ceases to be given off. Reduce to powder. Keep in stoppered bottles.

Prescribed in pills. 2½ grains, which are equal to 4 of the crystallized salt, make a nice pill with a mixture of equal parts of Liquid Glucose and Treacle.

Dose.—½ to 3 grs.

(Belg.; Dan. dried at 104°—122° F.; Ger. dried at 212° F.; Russ. dried at 77°—86° F.; U.S. dried at 300° F.; not in the others.)

LIQUOR FERRI PERSULPHATIS. Dark brown.

Sulphate of Iron, 8; Sulphuric Acid, ¾; Nitric Acid, ¾; Distilled Water, 12. Add the sulphuric acid to 10 of the water, and dissolve the sulphate of iron in the mixture with the aid of heat. Mix the nitric acid with the remaining 2 of the water, and add to this diluted acid warmed the solution of sulphate of iron. Concentrate the whole by boiling, until, by the sudden disengagement of ruddy vapours, the liquid ceases to be black, and acquires a red colour. A drop of the solution is now to be tested, with Ferricyanide of Potassium, and if a blue precipitate forms, a few additional drops of Nitric Acid should be added and the boiling renewed, in order that the whole may be converted into Persulphate of Iron. When the solution is cold, make up the quantity to 11 by the addition, if necessary, of Distilled Water.

Introduced for making several preparations of Iron.

N.B.—The quantity of Nitric Acid ordered is much too small to peroxidize the Iron.

Tests.—Sp. g. 1·441. 1 fl. dr. diluted with 2 oz. Distilled Water gives upon the addition of an excess of Solution of Ammonia a precipitate which when well washed and incinerated weighs 11·44 grs. Diluted with ten volumes of water, it gives a white precipitate with Chloride of Barium, and a blue one with Ferrocyanide, but not with Ferricyanide of Potassium (absence of Ferrous Salt.)

This solution is a good styptic, it mixes in all proportions with Water and Rectified Spirit.

(Ger. sp. g. 1·428—1·430; Russ. sp. g. 1·400; U.S. sp. g. 1·320; not in others.)

Not Official.

Mistura Ferri Laxans.—Sulphate of Iron, 2 grs.; Sulphate of Magnesia, 1 drm., Sulphuric Acid, 3 minims; Peppermint Water to 1 oz.—*St. Mary's Hospital.*

Lotio Ferri Sulphatis.—Sulphate of Iron, 3 grs.; Water, 1 oz.—*St. Bartholomew's Hospital.*

FERRI SULPHAS GRANULATA.

GRANULATED SULPHATE OF IRON.

$FeSO_4.7H_2O$, eq. 278.

Small granular crystals of a pale green colour, which are not so liable to become brown as those of the Ferri Sulphas.

Iron Wire, 4; Sulphuric Acid, 4; Distilled Water, 30; Rectified Spirit, 8. Pour the water on the iron placed in a porcelain capsule; add the acid, and when the disengagement of gas has nearly ceased, boil for ten minutes; filter the solution into a jar containing the spirit, stirring the mixture so that the salt shall separate in minute granular crystals. Pour off the liquid, and place the crystals on filtering-paper over porous bricks to dry by exposure to the atmosphere. Keep in stoppered bottles.

Solubility, 1 in 1½ of Water; insoluble in Rectified Spirit.

Tests.—The aqueous solution gives no precipitate with Sulphuretted Hydrogen, and one nearly white with Ferrocyanide of Potassium—indicating absence of Copper and Persulphate of Iron. 41·7 grains dissolved in Distilled Water acidulated with Sulphuric Acid continues to give a blue precipitate with Ferricyanide of Potassium until 500 grain-measures of the Volumetric Solution of Bichromate of Potassium have been added.

Medicinal Properties.—Same as Ferri Sulphas.

Dose.—1 to 5 grs.

(Not in the other Pharmacopœias.)

FERRUM REDACTUM.

REDUCED IRON.

Metallic Iron, with a variable amount of Oxide of Iron. A fine greyish-black powder, strongly attracted by the magnet, and exhibiting metallic streaks when rubbed with firm pressure in a mortar. Made by passing dry Hydrogen over Peroxide of Iron in a heated iron tube. It must be carefully preserved from the air.

It dissolves in Hydrochloric Acid with the evolution of Hydrogen, and without any smell of Sulphuretted Hydrogen, and the solution gives a light blue precipitate with Ferrocyanide of Potassium.

Test.—10 grains added to an aqueous solution of 50 grains of Iodine and 50 grains of Iodide of Potassium, and digested with them in a small flask at a gentle heat, leave not more than 5 grains undissolved, which should be entirely soluble in Hydrochloric Acid. Is easily ignited and converted into brown oxide.

Medicinal Properties.

It is one of the most powerful remedies in restoring the condition of the blood in all anæmic states of the system. It does not, however, possess the astringent properties of other preparations of Iron, and therefore cannot be used as a substitute in passive hemorrhage. It is chiefly employed in chlorosis, amenorrhœa, chorea, and enlargement of the spleen following intermittent fever. There is no pulverulent state of Iron so convenient as this for children, as it has no taste, and a very small dose is required.

Dose.—1 to 5 grs. several times daily, in powder or pill, or for children ¼ to 1 gr. (Austr. Belg. Dan. Fr. Ger. Russ. and U.S.)

1 grain of this is equal, medicinally, to 5 grs. of Ammonio-Citrate of Iron.

Preparations.

TROCHISCI FERRI REDACTI. Iron-grey.

Lozenges made of Reduced Iron, Sugar, and Gum Acacia.

Each lozenge contains 1 gr. of Reduced Iron.

Dose.—1 to 6 lozenges.

Not Official.

Pilula Ferri Redacti.—Reduced Iron, 3 grs.; Liquorice Powder 1 gr.; Mucilage of Tragacanth, q. s.: in one pill.—*St. Bartholomew's Hospital.*

FERRUM TARTARATUM.

TARTARATED IRON.

Syn. Ferri Potassio-Tartras.

Thin transparent scales of a deep garnet colour.

Solubility, 1 in 1 of Water, very sparingly in Spirit.

Tests.—The aqueous solution, acidulated with Hydrochloric Acid, gives a copious blue precipitate with Ferrocyanide, but none with Ferricyanide of Potassium (Ferric Salt). When the Salt is boiled with Solution of Soda, Ferric Hydrate separates, and the filtered solution, when slightly acidulated by Acetic Acid, gives as it cools a crystalline deposit. By incinerating 50 grains of this preparation at a red heat, and washing what is left with distilled water and again incinerating, a residue of Peroxide of Iron is obtained, weighing about 15 grains.

Dose.—5 to 10 grs.

(Austr. Kalium Ferro-tartaricum; Belg. Tartras Potassæ et Ferri; Dan. Tartras Ferrico-Kalicus; Fr. Tartrate Ferrico-Potassique; Russ. Ferro-Kali Tartaricum; U.S. Ferri et Potassii Tartras; not in Ger.)

Preparation.

VINUM FERRI. Intense olive-brown.

Fine Iron Wine (No. 35), 1 oz.; Sherry, 20 oz.: digest thirty days with frequent agitation, the wire not being wholly immersed. The bottle to be uncorked after each agitation.

Dose.—1 to 4 drms.

(Not in the other Pharmacopœias.)

Medicinal Properties.

Useful in restoring the blood, when a slight astringent is desired. May be prescribed with alkalies.

INCOMPATIBLES.—Mineral Acids, Lime Water, and all astringent vegetable preparations.

N.B.—The old Vinum Ferri, made with Malaga, is much sweeter than that of the British Pharmacopœia, and is sometimes ordered on that account.

Not Official.

MALATE OF IRON WINE.—In Devonshire a quantity of Iron Wire or Nails is digested in a bottle of Cider for a week, and a wineglassful three times a day is the dose.

FICUS.

FIG.

The dried fruit of *Ficus Carica,* imported from Smyrna.

(Fr. and U.S.; not in the others.)

Medicinal Properties.

Nutritious, laxative, and demulcent. Chiefly used medicinally in constipation. Cut open and heated, it is a convenient suppurative cataplasm.

Contained in Conf. Sennæ.

FILIX MAS.

MALE FERN.

The rhizome, with the persistent bases of the petioles of the perennial *Aspidium Filix-mas,* collected late in the autumn, and divested of its scales, roots, and all dead portions, and carefully dried with a gentle heat. Indigenous.

It should not be used more than a year old.

Only the green rhizome should be used: the brown stipes are inert. U.S.

Medicinal Properties.

The powder of the rhizome is slightly tonic and astringent; chiefly used as an anthelmintic and in tænia. It apparently acts by destroying the worm, the expulsion being aided by purgatives. The Extract is the best form.

Dose.—Of the powder, 60 to 180 grs.

(In all the Pharmacopœias; Fr. Fougère.)

Preparations.

EXTRACTUM FILICIS LIQUIDUM. Intense green. *Syn.* OIL OF MALE FERN.

Male Fern, in coarse powder, 1; Ether, 2½, or a sufficiency: pack the male fern closely in a percolator and pass the ether slowly through it until it passes colourless; distil off the ether, and preserve the oily extract.

Pharm. Dose, 15 *to* 30 *mins.*—60 to 80 minims in milk, or made into an emulsion with 1 to 2 drms. of very fresh mucilage, or ½ drm. to 1 drm. of powdered Acacia, or ½ drm. of compound powder of Tragacanth, and with peppermint water or milk to form a 2 oz. draught; best given on an empty stomach, and for tænia one-third part of the dose should be given at intervals of half an hour.

Sold also in capsules, 15 minims in each.

(In all the Pharmacopœias except Dan.; Austr. Ext. Filicis Maris; Belg. and Ger. Ext. Filicis; Fr. Extrait de Fougère Mâle; Russ. Extract. Filicis Maris Æthereum; U.S. Oleoresina Aspidii.)

Not Official.

MISTURA FILICIS.—Oil of Male Fern, 2 drms.; Comp. Powder of Tragacanth, 1 drm.; Peppermint Water to 2 oz.—*St. Mary's Hospital.*

FŒNICULI FRUCTUS.

FENNEL FRUIT.

The dried fruit of cultivated plants of *Fœniculum capillaceum.*

The ash was determined of Fruits (4 samples) 8·47, 8·93, 9·75, 7·70 per cent.; of Pulvis Fœniculi (6 samples) 24·64, 12·8, 9·90, 8·91, 13·0, 9·89 per cent., the first contained sand.

Medicinal Properties.

Stimulant, aromatic, and carminative. In action similar to Anise. Much employed as a corrigent of less agreeable medicines. In infantile cases the infusion is frequently employed as an enema for flatus.

(In all the Pharmacopœias.)

Contained in Pulvis Glycyrrhiza Comp.

Preparation.

AQUA FŒNICULI.

Fennel Fruit, bruised, 1; Water, 20: distil 10. =(1 in 10).

Dose.—1 to 2 oz.

(Austr. 1 in 20; Belg. with Oil, 1 in 3000; Dan. 1 in 0; Fr. 1 in 4; Ger. 1 in 30; Russ. with Oil, 1 in 1500; U.S. with Oil 1 in 500.)

Not Official.

FUCUS VESICULOSUS.

Bladder-wrack collected from the rocks by the seaside and dried.

EXTRACTUM LIQUIDUM.—Take of the plant dried and ground, 16; Rectified Spirit, 12; Distilled Water, 6: digest for seven days, press; again digest the marc for seven days in ⅔ more of the Spirit and Water mixed, press and filter the mixed products.

Dose.—A teaspoonful, given for obesity; it also diminishes glandular swellings in scrofulous cases.

Smelling fresh seaweed is said to relieve hay asthma.

(Fr.; not in others. Belg. Helmintochorton.)

GALBANUM.

GALBANUM.

A gum resin obtained from *Ferula galbaniflua and F. rubricaulis*, and probably other species, imported from India and the Levant; in masses of greenish-yellow tears, translucent.

Usually heated to 212° F. (100° C.), and strained before using.

Medicinal Properties.

Similar to Asafœtida, but less powerful. A stimulating expectorant. Chiefly used in chronic affections of the bronchial mucous membranes; externally as a plaster to indolent swellings to promote resolution or suppuration.

(In all the Pharmacopœias.)

Preparations.

EMPLASTRUM GALBANI. Buff colour.

Galbanum, 1; Ammoniacum, 1: melt together and strain, then add them to Yellow Wax, 1; Lead Plaster, 8, previously melted together, mix. =(1 in 11).

(In all the Pharmacopœias except Belg. and Fr., but the formulas are different.)

PILULA GALBANI.

The Pilula Galbani Composita had found a place in the London Pharmacopœia for the last half-century, and would naturally be looked for under Galbanum; its name, however, has been changed to Pilula Asafœtidæ Composita, and its composition somewhat altered. *See* ASAFŒTIDA.

Not Official.

PIL. GALBANI COMP. U.S.—Galbanum, 3; Myrrh, 3; Asafœtida, 1; Syrup, *q.s.*

UNG. GALBANI COMP.—Galbanum Plaster, 4 oz.; Lead Plaster, 4 oz.; White Wax, 4 oz.; Liquid Extract of Opium, 1 drm.; Olive Oil, 20 oz.: melt together and add Honey, 1 oz.

It is an excellent application for piles, boils, and carbuncles, for sore nipples and suppurating breasts.

GALLA.

GALLS.

Excrescences on *Quercus lusitanica var. infectoria*, caused by the punctures and deposited ova of *Cynips Gallæ-tinctoriæ*; chiefly from the Mediterranean and the East Indies.

Solubility: all the soluble matter of Galls is taken up by forty times their weight of boiling Water, and the residue is tasteless.

Galls contain about 35 per cent. of Tannin or Tannic Acid, and 5 per cent. of Gallic Acid, to which their therapeutic qualities may be attributed.

Medicinal Properties.

Powerfully astringent. Useful in hemorrhages, as menorrhagia, hematuria, and hemoptysis; also in increased mucous and other discharges. Externally to suppress hemorrhage from the gums, nose, &c.; to lesson the discharge from mucous membranes, as in gleet, leucorrhœa, &c.; as a gargle, lotion, injection, or decoction, more or less diluted.

Dose.—(Of powder) 10 to 20 grs. several times a day.

(In all the Pharmacopœias.)

INCOMPATIBLES.—The Mineral Acids, Salts of Iron and Lead, Sulphate of Copper, Nitrate of Silver, Carbonates of Potassium and Sodium, Lime Water, Tartar Emetic, Ipecacuanha, and Opium, Infusions of Cinchona, Calumba, and Cusparia.

Preparations.

ACIDUM GALLICUM. *See* ACIDUM GALLICUM.

ACIDUM TANNICUM. *See* ACIDUM TANNICUM.

TINCTURA GALLÆ. Deep brown.

Galls, in No. 40, powder, 1; Proof Spirit, 8: macerate for forty-eight hours with 6 of the spirit, agitating occasionally, pack in a percolator, let it drain, and then pour on the remaining spirit; when it ceases to drop, press the marc and add proof spirit to make 8. =(1 in 8).

Dose.—½ to 2 drms.

(Ger. and Russ. 1 and 5; U.S. 1 in 5 (all by weight); not in the others.)

UNGUENTUM GALLÆ. Deep fawn colour.

Galls, in very fine powder, 80 grs.; Benzoated Lard, 1 oz.: mix. =(1 in 6½).

(U.S. 1 in 10; not in the others.)

A useful application for hemorrhoids.

UNGUENTUM GALLÆ CUM OPIO. Brown.

Ointment of Galls, 1 oz.; Opium, in powder, 32 grs.; mix. =(Opium, 1 in 14⅔).

(Not in the other Pharmacopœias.)

Applied to painful hemorrhoids.

Not Official.

DECOCTUM GALLÆ.—Bruised Galls, 2½; Distilled Water, 40: boil to 20 and strain. =(1 in 8).

A most useful astringent lotion to suppress hemorrhage from the gums or nose and to lessen discharges from mucous surfaces.

SUPPOSITORIA contain 5 grs. powdered Galls and 1 gr. Opium in each.

Not Official.

GARCINIA PURPUREA.

KOKUM BUTTER TREE.

Grows in the forests of Malabar, the Concans, and other parts of the Madras Peninsula.

The oil of the seeds (*Kokum Butter*) is obtained by first exposing the seeds for some days to the action of the sun to dry; they are then bruised and boiled in water, the oil collects on the surface and on cooling contracts into a solid cake. It melts at 98° F. The seeds yield about 10 per cent. of oil.

Not Official.

GELATINE.

Gelatine is prepared chiefly from selected pieces of Calves' Pelt, which are treated by high-pressure steam; the gelatine which is dissolved out is spread on thin plates and when dry is cut into shreds for sale.

(Gelatine is official in Fr. and Russ., but not in the others.)

Soak 1 of Gelatine in 1 of Water; melt in a water bath with gentle heat; strain and add 5 of Glycerine, and pour the solution into a shallow dish; it forms, when set, the Hectograph plate; the note is written with Judson's violet dye, and placed face downwards on it, gently passed over with the fingers, and then taken off. The impression is left, and plain note paper applied and pressed upon, in succession, takes numerous facsimilies. Hot water and a sponge remove the impression when done with.

Gelatine dissolved in Glycerine is used for putting up microscopical specimens.

GELATINE BASIS FOR PESSARIES AND SUPPOSITORIES.—Soften 1 oz. of Gelatine by allowing it to soak in 1 oz. of water until it is absorbed, then dissolve in 3½ fl. oz. of Glycerine by the heat of a water bath, and allow it to cool and solidify.

This can be medicated by melting it over a water bath and suspending or dissolving in it substances in fine powder, and then pouring the mixture into moulds.

GELSEMIUM.

YELLOW JASMINE.

[NEW.]

The dried rhizome and rootlets of *Gelsemium nitidum*.

Now included in B. P.; was a Not Official in Companion 1877.

Medicinal Properties.

Useful in non-inflammatory toothache, and neuralgia of the nerves of the teeth. It exerts very little action on the heart; large doses produce general paralysis.

Dose.—5 to 30 grs.

Preparations.

EXTRACTUM GELSEMII ALCOHOLICUM. [NEW.]

Macerate Gelsemium (in No. 60 powder) 16 with Rectified Spirit 40 in a closed vessel forty-eight hours; pack in a percolator and let it drain, and then continue the percolation with Water until 40 of liquor have been collected: evaporate the percolate by a water bath to a suitable consistence.

Dose.—½ to 2 grs.

(Belg. and Fr.; not in the others. U.S. Fluid Extract, 1 in 1.)

TINCTURA GELSEMII.

Gelsemium, in No. 40 powder, 1; Proof Spirit, 8: macerate for forty-eight hours with 6 of the Spirit, agitating occasionally; pack in a percolator, let it drain, and then pour on the remaining Spirit; when it ceases to drop, press the marc, and add Proof Spirit to make 8. =(1 in 8).

Dose.—5 to 20 minims.

NOTE.—This is rather stronger than the Not Official Tincture, which was in Companion 1877.

(Belg. 1 in 5; U.S. 15 in 100; not in the others.)

ANTIDOTES.—Galvanism, Aromatic Spirit of Ammonia.

A girl nine years old was killed in two hours by a dose of two drachms of the tincture.

GENTIANÆ RADIX.

GENTIAN ROOT.

The dried root of the perennial herb *Gentiana lutea*, collected in the mountainous districts of Central and Southern Europe.

The active principle Gentiopicrin is a neutral crystalline body, soluble in Water and diluted Spirit, insoluble in Ether.

Medicinal Properties.

Used in all cases of pure debility of the digestive organs, or when a general tonic is required.

Dose.—(Of the powder) 10 to 40 grs. This powder is prescribed in pills when a large quantity of Essential Oil is given, to absorb it.

(In all the Pharmacopœias.)

INCOMPATIBLES.—Sulphate of Iron, Nitrate of Silver, and Lead Salts.

Preparations.

EXTRACTUM GENTIANÆ. Intense brown.

Gentian Root, sliced, 1; boiling Distilled Water, 10: infuse two hours, then boil fifteen minutes, press and strain, and evaporate over a water bath to a pilular consistence.

A good substance to add to powders to form them into pills.

Dose.—2 to 10 grs.

(Austr. Belg. Dan. Fr. Ger. Russ. and U.S. with cold water; U.S. also Fluid Extract, 1 in 1.)

INFUSUM GENTIANÆ COMPOSITUM. [MODIFIED.]

Gentian Root, sliced, 55 grs.; Bitter Orange Peel, cut small, 55 grs.; fresh Lemon Peel, cut small, ¼ oz.; Boiling Distilled Water, 10 oz.; infuse half an hour and strain. =(1 in 80).

Gentian and Orange Peel reduced from 60 to 55 grs., and the time reduced from 1 hour to ½ hour.

Dose.—1 to 2 oz.

(Fr. Tisane, Gentian Root, 1; cold Water, 200; not in the others.)

TINCTURA GENTIANÆ COMPOSITA. Deep brown.

Gentian Root cut small and bruised, 1½; Bitter Orange Peel, cut small and bruised, ¾; Cardamom Seeds, bruised, ¼; Proof Spirit, 20: macerate for forty-eight hours with 15 of the spirit, agitating occasionally, pack in a percolator, let it drain, and then pour on the remaining spirit; when it ceases to drop, press the marc and add proof spirit to make 20. =(1 in 13⅓).

Dose.—½ to 2 drms.

(U.S. 1 in 12·5; not in the others; Belg. Dan. Fr. Ger. and Russ. have a simple Tincture, 1 and 5; all by weight.)

Not Official.

MISTURA GENTIANÆ. B. P. 1867.

Gentian Root, sliced, ¼ oz.; Bitter Orange Peel, bruised, 30 grs.; Coriander, 30 grs.; Proof Spirit, 2 oz.; cold Distilled Water, 8 oz.; macerate the ingredients in the spirit for two hours, then add the water. Infuse for two hours and strain.

Dose.—½ to 1 oz.

(Is not strong enough to keep without change for more than fifteen or sixteen days.)

MISTURA GENTIANÆ ALKALINA.—Dil. Hydrocyanic Acid, 3 minims; Bicarbonate of Soda, 15 grs.; Comp. Infusion of Gentian 1 oz.—*Consumption Hospital.*

MISTURA GENTIANÆ ET SENNÆ.—Infusion of Gentian, 6 drms.; Infusion of Senna, 3 drms.; Comp. Tinct. of Cardamoms, 1 drm.—*St. George's Hospital.*

Not Official.

LIQUID GLUCOSE.

As met with in commerce it is clear almost colourless, devoid of smell, and resembles in consistency Canada Balsam.

When mixed with Treacle, equal parts, it forms an excellent excipient for pills.

GLYCERINUM.

GLYCERINE.

A sweet principle, $\mathbf{C_3H_5(HO)_3}$, eq. 92, obtained from fats and fixed oils. A clear colourless fluid, oily to the touch, without odour, of a sweet taste; when decomposed by heat it evolves intensely irritating vapours.

Solubility: in all proportions with water and Alcohol, but insoluble in Chloroform, Ether, and Oils.

It possesses great powers as a solvent, and is an excellent excipient for many medicinal substances. It dissolves its own weight of Borax, twice its weight of Crystallized Perchloride of Iron, and three times its weight of Carbolic Acid; it also dissolves Bromine and Iodine, the Iodide of Sulphur, the Chlorides of Potassium and Sodium, Salicylic Acid, Nitrate of Bismuth, the fixed alkalies, some of the alkaline earths, and a large number of neutral salts. It also dissolves the vegetable acids, and either suspends or dissolves the vegetable alkaloids. Many solutions are made with it for medicinal purposes, as of the Salts of Morphine, Quinine, Strychnine, Veratrine, Atropine, Tannic and Gallic Acids, and Arsenium.

It is antiseptic, 1 part to 10 of Water preserving animal substances equal to spirit.

Test.—Sp. g. 1·250, and contains 5 per cent. of Water. Found in commerce, 1·260.

(Austr. and U.S. sp. g. 1·250; Belg. sp. g. 1·240; Dan. sp. g. 1·230; Fr. sp. g. 1·242; Ger. sp. g. 1·225—1·235; Russ. sp. g. 1·230 to 1·250.)

It may be obtained of a specific gravity of 1·270, and even of 1·280, though with great difficulty; this very concentrated state is never required in medicine.

Medicinal Properties.

Internally it is nutrient and demulcent. It prevents the formation of wind and acidity when taken in 1 or 2 drachm doses, and does not hinder digestion (*Lancet*, July 3, 1880, p. 6). M. Barton states in the *American College and Clinical Record*) that four cases of trichinosis have recovered under large doses of glycerine. This treatment, which has been very widely recommended, is based on the fact that glycerine, applied to living trichinæ, at once shrivels them up and kills them. (*London Medical Record*, May 15, 1881, p. 193.) It has been proposed as a substitute for Cod-liver Oil, but its nutrient properties are far inferior. It is sometimes employed as a sweetening agent in the place of Syrup.

As an external remedy it is highly valued, chiefly from its emollient and undrying properties. In skin diseases where emollient and soothing applications are required, as pityriasis, lepra, herpes, eczema, psoriasis, prurigo, and lichen: for this purpose 15 grs. of Isinglass dissolved in 1 oz. of Glycerine answers best. Excellent for chilblains.

Used in poultices ($\frac{1}{14}$ or $\frac{1}{16}$), it keeps them soft for a long time.

Introduced into the ear on cotton wool, it relieves deafness arising from dryness of the external meatus.

Dose.—10 minims to 1 drm. 1 to 2 drms. Br. Ph.

Preparations.

GLYCERINUM ACIDI CARBOLICI	1 acid in 4½.
GLYCERINUM ACIDI GALLICI	1 acid in 4½.
GLYCERINUM ACIDI TANNICI	1 acid in 4½.
GLYCERINUM ALUMINIS	1 Alum in 5½.
GLYCERINUM AMYLI	1 Starch in 8½.
GLYCERINUM BORACIS	1 Borax in 4½.
GLYCERINUM PLUMBI SUBACETATIS . . .	
GLYCERINUM TRAGACANTHÆ	

The formulas for these are given under the several names quoted.

Contained in a large number of preparations.

Not Official.

Glycerine Cream for Chilblains.—Glycerine, 1; Soft Soap, 1; Cherry-laurel Water, 1: mix.

Glycerine Cream with Camphor.—Glycerine, 2; Camphor, 1; Rectified Spirit, 1: mix.

Glycerine Ointment.—Glycerine, 8; Spermaceti, 4; White Wax, 1; Oil of Almonds, 16: add the Glycerine to the melted ingredients, and stir briskly till cold.

Unguentum Glycerini—
Austrian formula.—Glycerine, 15; Starch, 1.
Russian formula.—Glycerine, 14; Starch, 1; Water, 1.
German formula.—Glycerine, 10; Tragacanth, 1; Alcohol (sp. g. ·832), 5; Water, 1.
(All by weight.) Heated together.
For chaps and excoriations.

Glycerine with Rose Water.—Glycerine, 1; Rose Water, 3: mix.

Glycerole of the Hypophosphites of Lime, Potash, and Soda.—Hypophosphite of Lime, 1; Hypophosphite of Potash, 1; Hypophosphite of Soda, 1. Dissolve these in 40 of water, filter, and add sugar, 40; Orange-flower Water, 2; Cherry-laurel Water, 2: dissolve, and add Glycerine, 12, and strain.

Dose.—1 or 2 drms.

Pessus Glycerini.—Glycerine, 2; Starch, 3; heat together until incorporated, and then press into moulds, weighing 2½ drms. for each pessary.

Gelatine Basis for Pessaries and Suppositories, *see* GELATINE.

GLYCYRRHIZÆ RADIX.

LIQUORICE ROOT.

The root or underground stems or stolons of the perennial herb *Glycyrrhiza glabra*, fresh and dried; cultivated in England.

Medicinal Properties.

An excellent demulcent as a decoction in catarrhal affections, irritation of the mucous membrane of the bowels and urinary passages. A useful adjuvant to decoctions of bitter or irritating vegetable substances. It is an important ingredient in Compound Decoction of Aloes. In the form of extract and its solution it is a domestic remedy for cough.

(In all the Pharmacopœias; Belg. Fr. and U.S. *G. glabra;* Russ. *G. echinata;* Austr. Dan. and Ger. both.)

Contained in Conf. Tereb., Dec. Sarsæ Co., Inf. Lini, Pilula Ferri Iodidi, Pil. Hydrargyri.

Preparations.

EXTRACTUM GLYCYRRHIZÆ. Black.

Liquorice Root, in No. 20 powder, 1; cold Distilled Water, 5: macerate the root in half of the water for twelve hours, strain and press; again macerate the pressed marc with the remainder of the water for six hours, strain and press; mix the strained liquors; heat to 212° F. (100° C.), strain through flannel, and evaporate over a water bath to a pill consistence.

Dose.—½ to 1 drm.

(Austr. Fr. (Ext. Réglisse) Belg. and Ger. (Ext. Liquiritiæ), from root with cold water; Belg. Dan. Fr. Russ. and U.S. also the crude extract in sticks.)

Contained in Confect. Sennæ, Decoctum Aloes Co., Mist. Sennæ Co., Tinct. Aloes, Trochisci Opii.

EXTRACTUM GLYCYRRHIZÆ LIQUIDUM. [MODIFIED.]

Process the same as for Extractum Glycyrrhizæ, except that the strained liquid is to be evaporated until, when cold, its sp. g. is 1·160, then add one-sixth of its volume of Rectified Spirit, let it stand for twelve hours, and filter.

2 fluid ounces of this = 1 oz. of solid extract.

It now contains more Spirit.

Dose.—1 drm.

(U.S. Liquorice Root percolated with a mixture of Dilute Ammonia, and Water.)

PULVIS GLYCYRRHIZÆ COMPOSITUS. [ALTERED.]

Syn. Pulvis Liquiritiæ Compositus, Pulvis Pectoralis Kurellæ.

Senna, in fine powder, Liquorice Root, in fine powder, of each 2; Fennel Fruit in fine powder, Sublimed Sulphur, of each 1; Refined Sugar, in powder, 6. Mix and pass through a fine sieve.

Note.—This preparation was put into the British Pharmacopœia 1867 because the German one was much prescribed; but in consequence of the formula being altered, it was incumbent on the chemist to keep both formulas. Brit. Pharm. have now adopted the German formula, which has been given as a Not Official in the Companion since 1873.

(Same as Ger. and Russ.; Belg. and U.S. almost the same; not in Austr. Dan. or Fr.)

Dose.—A teaspoonful or more for women, less in proportion for children, as a mild aperient.

Not Official.

Elixir e Succo Glycyrrhizæ, *seu* Elixir Pectorale, Ger. and Russ.—Purified Extract of Liquorice, 1; Fennel Water, 3; Ψ Anisated Liquid Ammonia, 1 (all by weight): mix.

Ψ Oil of Anise, 1; Rectified Spirit, 24; Liquor Ammoniæ, 5 (all by weight): Ger.
Oil of Anise, 1; Rectified Spirit, 32; Liquor Ammoniæ, 8 „ „ „ ; Russ.

Glycyrrhizinum Ammoniatum, Fr. and U.S.—A scale preparation made by treating Liquorice Root with Water, and adding Sulphuric Acid to the liquor so long as a precipitate is produced; collect this and wash it with cold Water; redissolve in Dilute Ammonia and spread on glass plates to dry.

GOA POWDER. *See* CHRYSAROBINUM.

GOSSYPIUM.

COTTON WOOL.

[ALTERED.]

The hairs of the seed of *Gossypium barbadense*, and other species of Gossypium, from which fatty matter and all foreign impurities have been removed.

Tests.—Inodorous and tasteless. It should readily be wetted by water, to which it should not communicate either an alkaline or acid reaction. On ignition in air it burns leaving less than 1 per cent. of ash.

U.S. Soluble in an Ammoniacal Solution of Sulphate of Copper.

(Ger. Gossypium Depuratum; U.S.; Fr. Coton, not washed; not in the others.)

Used to shield burns and scalds from contact of air.

Used in the preparation of Pyroxylin.

Cotton wool is medicated with Carbolic Acid, Salicylic Acid, Eucalyptol, Thymol, Arnica, Glycerine, Perchloride of Iron, Iodine, and with Iodoform.

Professor Tyndall introduced cotton wool as a filter in respirators.

MOUTH AND NOSE PROTECTOR.—For use in poisonous and injurious trades. We exhibited this respirator at the International Health Exhibition, and obtained for it a bronze medal. It consists of layers of washed and sterilised cotton wool placed between perforated zinc and perforated cardboard, formed into a pliable respirator which covers the mouth and nose.

Not Official.

GOSSYPII RADICIS CORTEX.

The bark of the root of *Gossypium herbaceum*, and of other species of Gossypium.

TINCTURA.—Dried bark of the root of the cotton plant, 1; Proof Spirit, 4: digest for seven days.

Dose.—1 drm. three times a day as an emmenagogue and parturient.

EXTRACTUM FLUIDUM U.S., 1 in 1, made with Glycerine and Alcohol.

GRANATI RADICIS CORTEX.

POMEGRANATE ROOT BARK.

The dried bark of the root of *Punica Granatum*; chiefly imported dried from the south of Europe.

Medicinal Properties.

Astringent and anthelmintic. It is considered more effective than turpentine in expelling tape-worm, and is less likely to cause nausea. Both in a green and dry state it is found equally effective in India. The dried is imported.

(In all the Pharmacopœias, Fr. Grenadier.)

INCOMPATIBLES.—Alkalies, Lime Water, Metallic Salts, Gelatine.

Preparation.

DECOCTUM GRANATI RADICIS.

Pomegranate Root Bark, sliced, 1; Distilled Water, 20: boil to 10, and strain, making the strained product up to 10, if necessary by pouring Distilled Water over the contents of the strainer.

=(1 in 10).

B. P. Dose.—2 to 4 oz.

(Belg. 1 and 6, boil to 4; Fr. Apozème, 1 and 12½, boil to 9; not in others.)

Not Official.

An excellent remedy for tape-worm is as follows:—

Bruised Root-bark of Pomegranate, 2 oz; Boiling Water, 24 oz.: macerate for 24 hours, and then boil till reduced to 18 oz. A third part early in the morning, a third part again in half an hour, and the remainder in another half-hour. A dose of Castor Oil should have been taken the previous morning, and solid food abstained from on that day. This rarely fails to bring away the entire worm in two hours, and the head at the thinnest end should be diligently sought for.

Tannate of Pelletierine:—Prepared from the Pomegranate Bark has been used abroad as a remedy for tape-worm, it has been given in doses of 50 centigrams followed by Castor Oil. (*Practitioner*, February, 1880, p. 134.) Should not be given to young children.

Not Official.

GRINDELIA ROBUSTA.

The leaves and flowering tops, from California.

Has been recommended in asthma and hay fever.

(U.S.; not in the others.)

A Fluid Extract can be made with Rectified Spirit of a strength 1 in 1.

Dose.—10 to 20 mins. every half-hour until relief is obtained. The Solid Extract may be given in doses of 3 grains three times a day.

The drug as imported into this country is not *G. Robusta*, but *G. Squarrosa*, but it is quite equal to that species in the amount of resin it contains, and indeed appears to be one of the richest in medicinal properties of the whole genus (*Pharm. Journal*, April 6th, 1878).

GUAIACI LIGNUM.

GUAIACUM WOOD.

The heart-wood of *Guaiacum officinale*, or of *Guaiacum sanctum*.

Imported from St. Domingo and Jamaica.

For use in Pharmacy the wood, as usually imported, should be deprived of its sap-wood, and the heart-wood reduced to the form of chips, raspings, or shavings.

Nitric Acid applied to the dark or central wood (heart-wood) produces a bluish-green colour: this part is considered to be the most active; it yields about 26 per cent. of resin.

(In all the Pharmacopœias, except Austr.)

Not often prescribed alone.

Contained in Decoctum Sarsæ Compositum.

GUAIACI RESINA.

GUAIACUM RESIN.

The resin obtained from the stem of *Guaiacum officinale*, or of *Guaiacum sanctum*, by natural exudation, by incision, or by heat.

In large masses or in tears of a brownish or greenish-brown colour; fractured surface resinous, translucent at the edges.

Solubility: about 90 per cent. is soluble in Alcohol, Ether, Chloroform, Aromatic Spirit of Ammonia, and Alkaline solutions; almost insoluble in Benzin.

Tests.—A solution in Rectified Spirit strikes a clear blue colour when applied to the inner surface of a paring of raw potato; or when paper moistened with the solution is exposed to the fumes of Nitric Acid it becomes blue.

(Fr. (Gayac Resine); in all the Pharmacopœias, except Ger.)

Medicinal Properties.

A stimulant diaphoretic and alterative. It is employed in chronic forms of rheumatism accompanied by great debility, in which the symptoms are relieved by warmth.

Generally prescribed in composition with other medicines.

Dose.—10 to 30 grs. three or four times a day until it causes hot sweating, with or without purging.

Contained in Pilula Hydrargyri Subchloridi Composita.

INCOMPATIBLES.—Mineral Acids, Spirit of Nitrous Ether.

Preparations.

MISTURA GUAIACI.

Guaiacum Resin, in powder, 2; Sugar, 2; Gum Acacia powder, 1; Cinnamon Water, 80: triturate, adding the Cinnamon Water gradually. =(1 in 40).

Dose.—½ to 2 oz.

(Not in the other Pharmacopœias.)

NOTE.—Gum Acacia does not suspend the Guaiacum well. It falls, and forms a compact sediment, which is difficult to disturb by shaking. If one-fourth the quantity of Tragacanth is used instead, it answers well.

TINCTURA GUAIACI AMMONIATA. Coats the side of the bottle. [MODIFIED.]

Macerate Guaiacum Resin, in powder, 4, with Aromatic Spirit of Ammonia, 15, for seven days, filter, and wash the filter with sufficient Aromatic Spirit of Ammonia to make 20. =(1 in 5).

The formula for Aromatic Spirit of Ammonia has been altered.

Dose.—½ to 1 drm., with 1 drm. of mucilage or yolk of egg, to form an emulsion.

(U.S., similar to Brit.; Dan. and Russ. 3 in 5 of Aqua Ammoniæ (sp. g. ·960) and 10 of Spirit, by weight; not in the others.)

Not Official.

TINCTURA GUAIACI.—Guaiacum Resin, 1; Rectified Spirit, 5: digest seven days.

(Austr. Belg. Dan. Fr. Russ. and U.S. 1 and 5 by weight; not in Ger.)

HAUSTUS GUAIACI COMPOSITUS.—Ammoniated Tincture of Guaiacum, 1 drm.; Mucilage, 2 drms.; Distilled Water to 1 oz.—*Middlesex Hospital.*

Not Official.

GUARANA.

The seeds of *Paullinia sorbilis* dried in the sun, and then roasted and reduced to a fine powder; this is moistened with a little water, exposed to the night dew, and when got into a hard paste is rolled into cylinders; these are further dried in the sun or in the chimneys of the huts. It is exported from Brazil.

True Guarana is very hard, heavy, and, when powdered, is reddish-grey, whilst the sophisticated is much lighter in colour; it contains about 4 per cent. Caffeine.

Medicinal Properties.

It is used chiefly for curing sick headache, when there is no determination of blood to the head, but is also useful in diarrhœa, dysentery, and as a tonic and stomachic in convalescence.

Dose.—30 grains, and repeated if necessary in 2 hours.

(Austr. Belg. Fr. Russ. and U.S.; not in Dan. or Ger.)

Tinctura.—Guarana, 1; Rectified Spirit, 4.

Dose.—1 to 2 drms. in water.

Extractum Fluidum, U.S.—1 equals 1 of Guarana.

Not Official.

GUMMI RUBRUM.

An exudation from the bark of *Eucalyptus rostrata*, imported from Australia. Solubility, of 100 parts 90 are dissolved by cold Water, the solution being clear. 27 parts of Isinglass precipitate all the astringent matter.

This gum adheres with great pertinacity to the mucous surfaces, and it is probably on this account that its astringency is more effective than that of Catechu, Kino, etc., although it contains less amount of astringent matter. Sir Ranald Martin introduced it into European practice.

Medicinal Properties.

4 to 6 grs. given every 2 or 4 hours are useful in diarrhœa and dysentery: sometimes given with Extractum Belæ Liquidum.

Decoctum.—Red Gum, 1; Water, 40: boil ten minutes, and strain.

Extractum Liquidum.—Red Gum, 7; Water, 21: dissolve, strain, and add Rectified Spirit, 1.

Dose.—30 to 60 minims in a wineglassful of water.

An excellent styptic; injected into the nostril, at once stays bleeding of the nose.

A tablespoonful in a pint of water forms an astringent injection for the vagina or rectum.

Lotio Ophthalmic Astringens.—Liquid Extract of Red Gum, 1 drm.; Distilled Water, 6 oz.

Useful in cases of bloodshot eyes where an astringent is required.

Suppositoria.—Powdered Red Gum, 5 grs.; Extract Nux Vomica, 1 gr.; Stearine, *q.s.*

Excellent for relaxed intestines and sphincter.

Syrupus.—Liquid Extract, 20; Sugar, 12: dissolve.

Dose.—30 to 60 minims.

Tinctura.—Gum, 1; Rectified Spirit, 4: digest and strain. Mixes with water without becoming turbid.

If made with Proof Spirit it is very apt to become a solid jelly, as Tincture of Kino did, when it was so made.

Dose.—20 to 40 minims.

1 part of this with 6 or 8 of water, with Diluted Sulphuric Acid or with Syrup of Lemons for gargles.

Trochisci.—Lozenges for relaxed throat.

GUTTA PERCHA.

GUTTA PERCHA.

The concrete juice of *Dichopsis gutta*, and of several other trees of the natural order Sapotaceæ.

In tough, somewhat flexible pieces, of a light brown or chocolate colour.

Soluble or nearly soluble in Chloroform, yielding a more or less turbid solution. Entirely soluble in Oil of Turpentine, Carbon Disulphide, and Benzol. Insoluble in Water, Alcohol, Alkaline solutions, or dilute Acids.

(Dan. Fr. Ger. Russ. and U.S.; not in Austr. or Belg.)

Preparations.

LIQUOR GUTTA PERCHA.

Gutta percha, in thin slices, 1 oz.; Chloroform, 8 fl. oz.; Carbonate of Lead, in fine powder, 1 oz. Add the Gutta percha to 6 fluid ounces of the Chloroform in a stoppered bottle, and shake them together frequently until solution has been effected. Then add the Carbonate of Lead previously mixed with the remainder of the Chloroform, and having several times shaken the whole together, set the mixture aside, and let it remain at rest until the insoluble matter has subsided. Lastly, decant the clear liquid, and keep it in a well-stopped bottle.

Used only in the preparation of Charta Sinapis.

(U.S.; not in the other Pharmacopœias.)

Not Official.

TRAUMATICINE.—A solution of 1 Gutta Percha in 10 (by weight) of Chloroform. It produces a thin delicate film when painted on the skin, and causes neither tension nor pain. It is used for medicated applications.—*P. J.*, Nov., 1883, p. 341.

Not Official.

GYNOCARDIÆ OLEUM.

CHAULMUGRA OIL.

Obtained from the seeds of *Gynocardia odorata*, a native of the forests of the Malayan Peninsula and Eastern India, as far north as Assam, extending thence along the base of the Himalayas as far west as Sikkim. The oil has been long known and used in India; it is solid, of a light brown colour, with disagreeable taste and smell, and can be readily melted by a gentle heat.

It has been recommended in the treatment of leprosy and other skin diseases, chronic rheumatism and gout, and secondary syphilis. Good results have been obtained from its external as well as internal administration in phthisis. (*Brit. Med. Journal*, Nov. 27, 1880, p. 844.)

Dose.—5 to 15 minims; it is best to begin with a small dose, 2 to 3 minims three or four times a day, gradually increasing; should be given after meals in milk or emulsion with gum acacia.

An ointment can be made of a strength about 1 in 4 with vaseline or other basis.

GYNOCARDIC ACID.—Chaulmugra Oil contains about 12 per cent. of an active principle, Gynocardic Acid, the dose of which is ½ grain in pill three times daily, gradually increasing to 2 grains.

HÆMATOXYLI LIGNUM.

LOGWOOD.

The heart-wood of *Hæmatoxylon Campechianum* sliced.

Imported from Campeachy in Central America, from Honduras and Jamaica.

The cherry-red inner wood is the part used.

Medicinal Properties.

The decoction is a mild astringent, without irritating properties, useful in atonic dyspepsia and ordinary chronic diarrhœa and dysentery, and in passive hemorrhages; also as an injection for leucorrhœa.

(Belg. and U.S.; Fr. Bois de Campêche; Russ. Lignum Campechianum; not in the others.)

Incompatibles.—Mineral Acids, Metallic Salts, Lime Water, Tartar Emetic.

Preparations.

DECOCTUM HÆMATOXYLI. [ALTERED.]

Logwood, in chips, 1 oz.; Cinnamon, bruised, 55 grs.; Distilled Water, 20 oz.: boil the logwood in the water for ten minutes, adding the cinnamon towards the end, strain, and pour on the contents of the strainer sufficient water to make 20 oz. =(1 in 20).

Cinnamon reduced from 60 to 55 grains.

Iron vessels should not be used.

Dose.—1 to 2 oz.

(Not in the others.)

EXTRACTUM HÆMATOXYLI. Dark liver colour.

Logwood, in fine chips, 1; boiling Distilled Water, 10: infuse twenty-four hours, boil to 5, strain, and evaporate to dryness by a water bath, stirring with a wooden spatula. Iron vessels should not be used.

Dose.—10 to 30 grs.

(Same as Belg. Russ. and U.S.; not in the others.)

Not Official.

Mistura Hæmatoxyli.—Lime Water, 3 drms.; Decoction of Logwood to 1 oz. —*Consumption Hospital.*

Mistura Hæmatoxyli Comp.—Extract of Logwood, 10 grs.; Wine of Opium, 5 minims; Ipecacuanha Wine, 10 minims; Chalk Mixture to 1 oz. For a dose. —*Guy's Hospital.*

Not Official.

HAMAMELIS VIRGINICA.

WITCH HAZEL.

It has been used in passive hemorrhage.

Tinctura.—Bruised Bark, 2; Proof Spirit, 20: macerate seven days.

Dose.—2 to 10 minims in water for Menorrhagia.

Extractum Fluidum, U.S.—1 equals 1 of Leaves percolated with Dilute Spirit.

Not Official.

HELLEBORUS NIGER.

Medicinal Properties.

A hydragogue cathartic, emmenagogue. In large doses poisonous.

Tinctura.—Root, 1; Proof Spirit, 8. *Dose.*—½ to 1 drm.

Extractum.—Made with Proof Spirit. *Dose.*—3 to 5 grs.

HEMIDESMI RADIX.

HEMIDESMUS ROOT.

The root of *Hemidesmus Indicus* (Indian Sarsaparilla), dried. Imported from India.

Medicinal Properties.

Diuretic. Useful as an alterative in some diseases of the kidneys. It was brought to England by Dr. Ashburner about the year 1830, and was prescribed for skin diseases and indigestion, like Sarsaparilla, but it did not prove very satisfactory, and is now used chiefly as a flavouring agent.

(Not in the other Pharmacopœias.)

Preparation.

SYRUPUS HEMIDESMI. Intense brown.

Hemidesmus Root, bruised, 1; Refined Sugar, 7; boiling Distilled Water, 5: infuse the root in the Water for four hours, and strain; set it by till the sediment subsides, decant the clear liquor, add the Sugar, and dissolve by a gentle heat. The product should weigh 10½ and measure 8. Sp. g. about 1·335. =(1 in 8).

Dose.—1 to 2 drms.

(Not in the other Pharmacopœias.)

HIRUDO.

THE LEECH.

Sanguisuga medicinalis, the Speckled Leech (English Leech), belly greenish-yellow, spotted with black. Fr. Sangsue médicinale.

S. officinalis, the Green Leech, belly olive-green, not spotted; imported chiefly from Hamburg. Also collected in large numbers in Spain, France, Italy, and Hungary.

Bleeding from leech bites is sometimes difficult to stop. The following remedies have been applied with advantage:—Matico Leaf, Solution of Perchloride of Iron, Nitrate of Silver Point, and saturated Solution of Alum.

(In all the Pharmacopœias except U.S.)

HORDEUM DECORTICATUM.

PEARL BARLEY.

The dried seed of *Hordeum distichon*, divested of its integuments: from plants cultivated in Britain.

Fr. Orge Perlé.

Preparation.

DECOCTUM HORDEI.

Pearl Barley, 1; wash the Barley with cold water, then add to the washed barley Distilled Water, 15; boil twenty minutes in a covered vessel and strain. Product about 10. =(about 1 in 10).

(Fr. Tisane d'Orge, 1 in 50; not in the others.)

Medicinal Properties.

Demulcent, used as a drink in the sick-room.

Dose.—1 to 4 oz.

HYDRARGYRUM.

MERCURY.

Hg, eq. 200.

A brilliantly lustrous silver-white metallic liquid, becoming solid at —39° F.—39·4° C. Sp. g. 13·5.

From China, Almaden in Spain, and Idria in Carniola; also from Peru and California. It is chiefly obtained from its Sulphuret (native Cinnabar) by distillation; but it is sometimes found in globules disseminated through the ore.

Mercury, as imported, is, after being squeezed through leather, nearly free from impurities. It was first employed medicinally by the Arabian physicians Avicenna and Rhazes, but they only ventured to use it externally against vermin and cutaneous diseases. We are indebted to that renowned empiric Paracelsus for its administration internally. *Pereira, Mat. Med.* 1849.

In this work Calomel is called the Subchloride of Mercury, and Corrosive Sublimate the Perchloride; and the British Pharmacopœia, 1867, has adopted these terms.

(In all the Pharmacopœias.)

Test.—Entirely volatilized at a temperature below that of visible redness, leaving no residue.

Medicinal Properties.

Mercury as a metal is seldom given alone. In a state of minute subdivision with Chalk, however, it has the effect of increasing the various secretions, its influence upon the salivary glands being the ordinary index of the amount of its action. It is cholagogue and purgative, and powerfully affects the mucous membranes of the intestinal canal. It causes the absorption and prevents the formation of morbid fluids, and is itself absorbed in all the tissues of the body.

It is used in congestion of the liver, kidneys, &c., in acute and chronic inflammation, and as a depletive in fevers. Of great use in syphilis, though sometimes followed by serious and even fatal consequences.

As an alterative, it is a safe and efficient medicine.

Externally, as a topical stimulant to indurated and chronically inflamed parts, and sometimes for introducing the metal into the system.

Preparations.

EMPLASTRUM HYDRARGYRI. Blue.

Mercury, 3 oz. (by weight); Olive Oil, 56 grs. (by weight); Sublimed Sulphur, 8 grs.; Lead Plaster, 6 oz.: heat the oil, add the sulphur to it gradually, stirring till they unite; add the mercury, and triturate till its globules disappear; then add to the mixture the lead plaster, previously liquefied, and mix the whole thoroughly.

=(about 1 in 3).

(In all the Pharmacopœias. Austr. 1 in 5·4; Belg. 1 in 5·25; Dan. Ger. and Russ. 1 in 5; Fr. 1 in 5·6; U.S. 3 in 10; the ingredients differ considerably.)

EMPLASTRUM AMMONIACI CUM HYDRARGYRO. Brownish lead colour.

Ammoniacum, 12 oz.; Mercury, 3 oz. (by weight); Olive Oil, 56 grs. (by weight); Sublimed Sulphur, 8 grs.: heat the oil, and add the sulphur to it gradually, stirring till they unite. With this mixture triturate the mercury until globules are no longer visible; and lastly, add the ammoniacum, previously liquefied by heat, mixing the whole carefully. =(nearly 1 in 5).

Applied as a discutient to glandular swellings, syphilitic nodes, and in chronic synovitis.

(U.S.; not in the others.)

LINIMENTUM HYDRARGYRI.

Ointment of Mercury, 1; Solution of Ammonia, 1; Liniment of Camphor, 1: mix the Solution of Ammonia with half of the Liniment of Camphor, rub the Mercurial Ointment with the other half, then mix them together.

=(1 Ointment in 3, or 1 of Mercury in 6).

(Not in the other Pharmacopœias.)

A stimulating Liniment, applied to indolent ulcers; placed with lint in the armpits, it is a sure mode of producing salivation.

PILULA HYDRARGYRI. Blue.

Mercury, 2 (by weight); Confection of Roses, 3; Liquorice Root in fine powder, 1: rub the mercury with the confection of roses until metallic globules are no longer visible, then add the liquorice, and mix the whole well together. =(1 in 3).

Dose.—3 to 8 grs. as an alterative, 10 grs. as a purgative.

(Belg. Pilulæ Hydrargyricæ; Fr. Pilules Mercurielles Simples; U.S. Massa Hydrargyri, all 1 in 3; not in the others.)

SUPPOSITORIA HYDRARGYRI. [MODIFIED.]

Ointment of Mercury, 60 grs.; Oil of Theobroma, 120 grs.: melt the oil, add the ointment of mercury, and stir till well mixed, and without applying more heat immediately pour into moulds, the capacity of 15 grs. each, dividing the mass into 12 equal parts.

Benzoated Lard and White Wax now omitted.

Each suppository contains 5 grs. of Mercurial Ointment.

UNGUENTUM HYDRARGYRI. Lead colour.

Mercury, 16 (by weight); Prepared Lard, 16; Prepared Suet, 1: rub them together until metallic globules cease to be visible.

=(nearly 1 in 2).

(Belg. and Fr. 1 in 2: U.S. 4·5 in 10; Fr. has also Pommade Mercurielle Faible, 1 in 4; Austr. Ger. and Russ. Ung. Hydr. Ciner. 1 in 3; Dan. 1 in 5.)

UNGUENTUM HYDRARGYRI COMPOSITUM. Lead colour.

Ointment of Mercury, 6; Yellow Wax, 3; Olive Oil, 3 (by weight); Camphor, 1½: melt the wax and the oil, then incorporate the ointment of mercury, and when the mixture is nearly cold, add the camphor in powder and stir the whole thoroughly together.

This is Scott's celebrated absorbent Ointment, the Soap Cerate being replaced by the Oil and Wax.

It is an admirable Ointment to apply to carbuncles and other indolent tumours.

Not Official.

Unguentum Hydrargyri cum Ammoniæ Muriate (Dupuytren).—Mercurial Ointment, 16; Muriate of Ammonia in fine powder, 1: mix.

Applied to chronic glandular enlargements.

Not Official.

HYDRARGYRI BROMIDUM.

Hydrargyri Bromidum.—Pessaries made containing ½ gr. each.

Hydrargyri Bibromidum.—Pessaries made containing ⅛ gr. each, and an Ointment containing 4 grs. to 1 oz.

HYDRARGYRI IODIDUM RUBRUM.

RED IODIDE OF MERCURY.

HgI_2, eq. 454.

A crystalline powder of a vermilion colour.

Solubility: almost insoluble in Water; sparingly soluble in Glycerine; 1 in 300 of Rectified Spirit; 1 in 70 of Ether; freely in an aqueous solution of Iodide of Potassium.

Tests.—It sublimes entirely at a heat below redness. When heated gently it becomes yellow, and resumes its scarlet colour on cooling.

(U.S.; Austr. and Russ. Hydrargyrum Biiodatum Rubrum; Ger. Hydrargyrum Biiodatum; Belg. Deutoioduretum Hydrargyri; Dan. Iodetum Hydrargyricum Rubrum; Fr. Iodure Mercurique.)

Medicinal Properties.

A powerful irritant poison, similar to the Green Iodide, only much more active. It is used internally in the same cases as Corrosive Sublimate; externally in scrofula and syphilis.

Dose.—$\frac{1}{16}$ grain, increasing to ¼ grain.

Best given in a solution of Iodide of Potassium.

Preparations.

UNGUENTUM HYDRARGYRI IODIDI RUBRI. Scarlet, but blackens by exposure to light.

Red Iodide of Mercury in very fine powder, 16 grs.; Simple Ointment, 1 oz.: mix. =(1 in 28)

(Not in the other Pharmacopæias.)

A most effective application for bronchocele, and a good application for warts and syphilitic nodes.

If applied to the eyelids, should be diluted to ¼ the strength, and even then it is a rubefacient to delicate skins.

Not Official.

Mistura Hydrargyri Iodidi.—Solution of Perchloride of Mercury, 1 drm.; Iodide of Potassium, 5 grs.; Tincture of Iodine, 8 mins.; Cinnamon Water, to 1 oz. —*Charing Cross.*

Solutio.—Red Iodide, 3; Iodide of Potassium, 1; Water, 4: dissolve. 2 minims contain 1½ grs. of Red Iodide.

Not Official.

HYDRARGYRI IODIDUM VIRIDE.

GREEN IODIDE OF MERCURY.

HgI, eq. 327.

A dull green powder, which darkens in colour upon exposure to light.

Mercury, 1 oz. (by weight); Iodine, 278 grs.; Rectified Spirit, a sufficiency; rub the iodine and mercury in a porcelain mortar, occasionally moistening the mixture with a few drops of the spirit to prevent violent action, and continue the trituration until metallic globules are no longer visible, and the whole assumes a green colour; then wash the product with rectified spirit and finally dry it in a dark room, on filtering-paper, by simple exposure to the air, and preserve in an opaque bottle.

This should be freshly made, as Biniodide of Mercury forms after being kept some time, and becomes evident in minute red specks prevading the mass.

Insoluble in Water and Ether.

(U.S.; Austr. Hydrargyrum Iodatum flavum; Belg. Proto Ioduretum Hydrargyri; Ger. Hydrargyrum Iodatum; Fr. Iodure Mercureux; Dan. Iodetum Hydrargyrosum flavum; Russ. Hydrargyrum Iodatum Viride.)

Tests.—Entirely volatilized at a red heat. When shaken in a tube with Ether, nothing is dissolved. Is not acted upon by Aniline at a boiling heat, but if Biniodide be present, a magenta colour is produced.

Medicinal Properties.

An irritant poison, similar to calomel in action. In small repeated doses it acts upon the lymphatic and glandular systems, and sometimes causes salivation. Employed as an ointment (1 part to 8 of Lard) for scrofulous and venereal eruptions, and chronic skin diseases.

Dose.—½ to 3 grs., for children ⅙ to ½ grain.

Not Official.

Pilula Hydrargyri Iodidi Viridis.—Green Iodide of Mercury, ½ gr.; Opium, ¼ gr.; Extract of Gentian, 2 grs.—*British Skin.*

Unguentum.—Green Iodide of Mercury, 10 grs.; Sulphate of Atropine, 1 gr.; Lard, ½ oz.

This ointment is most useful in softening and reducing indurated Fascia of the fingers, which causes them to close upon the hand.

HYDRARGYRI NITRATIS LIQUOR ACIDUS.

ACID SOLUTION OF NITRATE OF MERCURY.

Nitrate of Mercury, **$Hg\,2NO_3$**, eq. 324; in solution in Nitric Acid.

A colourless and strongly acid solution.

Mercury, 4 (by weight); Nitric Acid, 5; Distilled Water, 1½: mix the nitric acid with the water in a flask, and dissolve the mercury in the mixture without the application of heat. Boil gently for fifteen minutes, cool, and preserve the solution in a stoppered bottle away from the light.

Tests.—Sp. g. about 2·0 gives a yellow precipitate with Solution of Potash added in excess. Does not give any precipitate when a little of it is dropped into Hydrochloric Acid, diluted with twice its volume of water.

(U.S. sp. g. 2·100; Russ. Hydrargyrum Nitricum Oxydulatum Solutum, 10 per cent. of Nitrate; Belg. Nitras Hydrargyri liquidus sp. g. 1·44—1·45; Dan. Solutio Nitratis Hydrargyrosi; Fr. Azotate Mercurique Liquide, sp. g. 2·246; not in Austr. or Ger.)

Medicinal Properties.

Caustic. Applied to syphilitic warts, ulcers, tubercles, &c. Used by Recamier in cancerous diseases. As a gargle, 1 or 2 minims to 1 oz. water. As an injection in gonorrhœa, 1 minim to 2 oz. water.

Preparations.

UNGUENTUM HYDRARGYRI NITRATIS. Lemon colour. *Syn.* Unguentum Citrinum.

Mercury, 4 (by weight); Nitric Acid, 12; Prepared Lard, 15; Olive

Oil, 32: dissolve the mercury in the nitric acid with the aid of a gentle heat; melt the lard in the oil by a steam or water bath in a porcelain vessel capable of holding six times the quantity, and while the mixture is at about 212° F. (100° C.) add the solution of mercury, also at about 212° F., mixing them thoroughly. If the mixture does not froth up, increase the heat till this occurs and stir till cold. (The heat required for this is 170° to 180° F. =(about 1 in 15½).

Applied in chronic diseases of the skin as a stimulant and alterative; very efficacious in porrigo; in ophthalmic diseases, diluted with 1 or 2 parts or more of spermaceti ointment, and applied by means of a camel's-hair pencil to the eyelids.

We are chiefly indebted to Dr. Duncan for the improved formula which, with some modification, is adopted by the British Pharmacopœia, so that we have now an ointment that remains soft, and retains its beautiful lemon colour for a long time. This Ointment, however, on being diluted with lard, soon acquires a leaden colour; it changes less with Spermaceti Ointment, and least of all when diluted with Vaseline.

Belg. Mercury, 69; Nitric Acid (s. g. 1·33), 103; Lard, 414; Olive Oil, 414.
Dan. Mercury, 1; Nitric Acid (s. g. 1·48—1·5), 2; Lard, 3; Olive Oil, 9.
Fr. Mercury, 4; Nitric Acid (s. g. 1·390), 8; Lard, 40; Olive Oil, 40.
U.S. Mercury, 7; Nitric Acid (s. g. 1·42), 17; Lard Oil, 76.

UNGUENTUM HYDRARGYRI NITRATIS DILUTUM. [NEW.]

Nitrate of Mercury Ointment, 1; Soft Paraffin, 2: mix.

Not Official.

VASELIN. HYDRARGYRI NITRATIS.

The Author has prepared some Citrine Ointment, using the same proportions of Mercury and Acid as ordered in the Pharmacopœia, but in the place of the Lard and Olive Oil he has used White Vaseline. The Acid and Mercury are put into a flask, the Vaseline heated in a water bath to 180° F.; if the Mercury is not all dissolved it is held in the bath till it is; it is then poured into the Vaseline, and stirred together till cold. It makes a nice ointment and keeps well; it may be diluted to any extent with White Vaseline, without impairing in the least the beautiful lemon colour it possesses. Yellow Vaseline may be used to dilute it, but not to prepare it.

INCOMPATIBLES.—Camphor and all reducing agents, as lard, etc.

HYDRARGYRI OLEATUM.

OLEATE OF MERCURY.

See also ACIDUM OLEICUM, p. 20.

Made by dissolving recently precipitated and well-dried Yellow Oxide of Mercury in Oleic Acid.

This preparation was introduced by Prof. Marshall in 1872, and was made of three different strengths, containing respectively 5 per cent., 10 per cent., and 20 per cent. of Oxide of Mercury.

The 5 per cent. very quickly changed to a black colour owing to reduction of the Mercuric Oxide; the 10 per cent. kept better but not very long without change. It is better to keep the 20 per cent. and dilute it when required for use.

Oleate of Mercury is best prepared by precipitation. Dissolve Yellow Oxide of Mercury, 150 grains, in a mixture of Nitric Acid, 130 grains, and Water, 2 oz.; dilute this to 40 oz. with Water. Add Solution of Oleate of Potassium, 20 oz., constantly stirring, warm gently and wash with warm water. Pour off the water, and dry at a gentle heat.

This represents 28·4 per cent. of Oxide of Mercury, which may be diluted to any strength with Oleic Acid.

OLEATE OF MERCURY AND MORPHINE is made by dissolving 1 grain of Morphine Alkaloid in each drachm of the Oleate of Mercury.

HYDRARGYRI OXIDUM FLAVUM.

YELLOW OXIDE OF MERCURY.

HgO, eq. 216.

Perchloride of Mercury, 4 oz.; Solution of Soda, 40 oz.; Distilled Water, a sufficiency.

Dissolve the Perchloride of Mercury in 80 ounces of Distilled Water, aiding the solution by the application of heat, and add this to the Solution of Soda. Stir them together; allow the yellow precipitate to subside; remove the supernatant liquor by decantation; thoroughly wash the precipitated Oxide on a calico filter with distilled water; and finally dry it by the heat of a water bath.

Tests.—A heavy, impalpable, yellow powder permanent in the air, but turning darker on exposure to light. The solution in Hydrochloric Acid gives, with solution of Ammonia, a white precipitate. It is entirely volatilized when heated to incipient redness, being resolved into oxygen gas and the vapour of mercury.

Insoluble in Water or Rectified Spirit; soluble in Nitric Acid and Hydrochloric Acid.

1 gr. to 60 grs. of spermaceti ointment is the proper strength for the eyelids.

(Austr. Hydrargyrum oxydatum flavum; Belg. Oxydum Hydrargyri Flavum; Fr. Oxyde Mercurique Jaune; Ger. and Russ. Hydrargyrum oxydatum viâ humidâ paratum; U.S. Hyd. oxid. flav.)

Not Official.

UNGUENTUM HYDRARGYRI OXIDI FLAVI.
Yellow Oxide, 10; Lard, 72; Yellow Wax, 18; U.S. =(1 in 8.)

POMMADE AVEC L'OXYDE JAUNE DE MERCURE.
Yellow Oxide, 1; Vaseline, 15; Fr.

HYDRARGYRI OXIDUM RUBRUM.

RED OXIDE OF MERCURY.

Syn. HYDRARGYRI NITRICO-OXIDUM, Lond.

HgO, eq. 216.

An orange-red powder.

Solubility: insoluble in Water and Rectified Spirit; readily soluble in Hydrochloric Acid.

Tests.—Entirely volatilized at a red heat, being at the same time decomposed into mercury and oxygen. If this be done in a test-tube, no orange vapours are perceived—indicating absence of Nitrate. The solution in Hydrochloric gives a yellow precipitate with solution of Potash in excess, and a white precipitate with solution of Ammonia.

Medicinal Properties.

A powerful irritant. Internally, it excites vomiting and purging however, it is rarely thus used. Chiefly employed as an escharotic, either in powder or ointment.

Dose.—¼ to 1 gr. in pill, in combination with Opium.

(U.S.; Belg. Oxydum Hydrargyri Rubrum; Dan. Oxydum Hydrargyricum; Ger. Hydrargyrum Oxydatum; Russ. Hydrargyrum Oxydatum Rubrum; Fr. Oxide Mercurique Rouge; not in Austr.)

Preparation.

UNGUENTUM HYDRARGYRI OXIDI RUBRI. Red. [ALTERED.]

Red Oxide of Mercury in very fine powder, 62 grs.; Hard Paraffin, ¼ oz.; Soft Paraffin, ¾ oz.; melt the Hard and Soft Paraffins together, and when the mixture in cooling begins to thicken add the Oxide of Mercury in a glass or porcelain mortar and mix the whole thoroughly. =(1 in 8).

This ointment was formerly made with Yellow Wax and Oil of Almonds, but in B. P. 1885 these are replaced with the Hard and Soft Paraffins.

(Belg. 1 in 50; Dan. 1 in 20; Fr. 1 in 16 Ger. and U.S. 1 in 10; Russ. with precipitated oxide 1 in 50; not in Austr.)

Red oxide with both lard and simple cerate soon gets blue by keeping; with spermaceti ointment, however, it keeps its colour for months.

HYDRARGYRI PERCHLORIDUM.

PERCHLORIDE OF MERCURY.

$HgCl_2$, eq. 271.

Syn. HYDRARGYRUM CORROSIVUM SUBLIMATUM, Brit. 1864; HYDRARGYRI BICHLORIDUM, Lond.; SUBLIMATUS CORROSIVUS, Edin.; SUBLIMATUM CORROSIVUM, Dub.; CORROSIVE SUBLIMATE.

In heavy colourless masses of prismatic crystals.

Solubility: 1 in 19 of Water; 1 in 5 of Rectified Spirit; 1 in 6 of Ether; 2 in 3 of Glycerine.

Tests.—Entirely soluble in Ether. When heated, it sublimes without decomposition, or leaving any residue. Its aqueous solution gives a yellow precipitate with Caustic Potash, a white precipitate with Ammonia, and a curdy white percipitate with Nitrate of Silver.

(Austr. and Russ. Hydrarg. Bichloratum Corros.; Belg. Sublimatus Corrosivus; Dan. Chloretum Hydr. Corros.; Fr. Chlorure Mercurique; Ger. Hydrarg. Bichloratum; U.S. Hydrarg. Chloridum Corros.)

Medicinal Properties.

A powerful irritant, given in very small doses in syphilitic affections. Externally as a lotion or ointment in chronic skin diseases, as an injection for chronic mucous discharges, and as a gargle for ulcerated sore throat.

An aqueous solution 1 in 10,000 is a reliable agent for the destruction of micrococci and bacilli in active growth not containing spores; and 1 in 1,000 destroys the spores if allowed sufficient time, and can be used for washing floors, bedding, clothing, instruments, superficial wounds, and mucous surfaces. For continual application to wounds 1 in 10,000; 1 in 500 with the same percentage of Permanganate of Potassium can be used for pouring on fæcal discharges, and should be left in contact for two hours.—*Lancet*, April 18, 1885, p. 721.

Dr. Hulbert of St. Louis, stated that he had salivated five patients with a solution 1 in 3,000 given as a vaginal douche twice a day.—*Lancet*, April 11, 1885, p. 677.

Is a powerful hepatic, but a feeble intestinal stimulant.

When Calomel and Perchloride of Mercury are given together, both the liver and intestinal glands are stimulated.—Dr. Rutherford.

Dose.—$\frac{1}{16}$ to $\frac{1}{8}$ gr.

Incompatibles.—Alkalies and their Carbonates, Lime Water, Tartar Emetic, Nitrate of Silver, Acetate of Lead, Albumen, Iodide of Potassium, Soaps, Decoction of Bark.

Antidotes.—In case of poisoning by Corrosive Sublimate, if vomiting does not already exist, it must be excited by the use of emetics; both the yolk and white of egg mixed with water may be administered in large quantity; wheaten flour with milk has also been recommended.

Preparations.

LIQUOR HYDRARGYRI PERCHLORIDI. Colourless.

Perchloride of Mercury, 10 grs.; Chloride of Ammonium, 10 grs.; Distilled Water, 20 oz.: dissolve. =(1 in 875).

Each fluid drachm contains $\frac{1}{16}$ grain.

Dose.—30 to 120 minims.

(Belg. and Fr. (Liqueur de Van Swieten) 1 in 1000; not in the others.)

LOTIO HYDRARGYRI FLAVA.

Perchloride of Mercury, 18 grs.; Solution of Lime, 10 oz.: mix. =(1 in 243).

(Aq. Phagedænica, Belg. and Dan. 1 in 250; Fr. and Russ. 1 in 300; not in Austr. Ger. or U.S.)

Not Official.

Sublimate Wood Wool.—Is Pinewood reduced almost to a state of powder, containing $\frac{1}{2}$ per cent of Corrosive Sublimate. It is highly absorbent.

Sero-Sublimate Gauze.—Has been suggested as a substitute for ordinary Sublimate Gauze; it is prepared with the serum of horses' blood, and contains 1 per cent. of Corrosive Sublimate.—*Lancet*, October 25, 1884, p. 723.

Collyrium Hydrargyri.—Corrosive Sublimate, 1 gr.; Water, 6 to 8 oz.: mix.

Gargarisma Hydrargyri.—Corrosive Sublimate, 4 grs.; Hydrochloric Acid, 8 minims; Water, 10 oz.

Unguentum Hydrargyri Perchloridi.—Corrosive Sublimate, 2 grs.; Lard, to 1 oz.: mix. For Porrigo.—*Charing Cross Hospital.*

Liégeois' solution for subcutaneous injection is 1 gr. to 1 oz. Distilled Water: $\frac{1}{10}$th part of this may be injected, in divided portions, in the course of one day.

HYDRARGYRI PERSULPHAS.

PERSULPHATE OF MERCURY.

$HgSO_4$, eq. 296.

A white, heavy, crystalline powder, which is decomposed by water, forming a yellow oxysulphate called Turpeth Mineral.

Entirely volatilized by heat.

Used to prepare Subchloride and Perchloride of Mercury.

(Fr. Sulphate Mercurique; not in the others; U.S. Hydrargyri Subsulphas Flavus.)

HYDRARGYRI SUBCHLORIDUM.

SUBCHLORIDE OF MERCURY.

Syn. Calomelas, 1864, Edin. Dub.; Hydrargyri Chloridum, Lond.; Calomel.

$HgCl$, eq. 235·5.

A dull white, heavy, and nearly tasteless powder. It is, however, liable to become fawn-coloured by the action of light, unless it has been sublimed into steam.

Insoluble in Water, Rectified Spirit, or Ether.

Tests.—Digested with Solution of Potash it becomes black. Entirely volatilized by a sufficient heat—indicating absence of impurities. Warm Ether, which has been shaken with it in a bottle, leaves on evaporation no residue—indicating absence of Corrosive Sublimate.

Medicinal Properties.

Alterative, *cholagogue? purgative, and antiphlogistic.

Calomel stimulates the intestinal glands, but not the liver.—Dr. Rutherford.

The author is informed, however, by good observers who are in large practice that Calomel does unload the liver, affords relief in biliary affections, and causes light-coloured motions to become a healthy brown colour. It therefore remains for the physiologist to explain its mode of action.

As an alterative it is used in syphilitic affections, chronic skin diseases, and scrofula in adults.

Useful in chronic hepatitis and jaundice.

As a purgative in bilious headache, hepatic dropsy, melæna, inflammation of the brain, and apoplexy.

As an antiphlogistic, 2 grs. combined with ¼ gr. opium, every four hours in inflammation of the serous membranes; *e.g.* iritis, pleurisy, and peritonitis.

For children, the absence of taste renders it convenient.

Its *local uses* are numerous, as in snuff, or as a gargle in venereal sore throat, as an injection with or without lime water, in blennorrhœa, and in fumigation; for this latter purpose a spirit lamp under a metal cup containing calomel, is placed under a cane-seated chair on which the patient is seated, his body being covered with a blanket; an apparatus contrived by Mr. Lee is still better. In a wide range of skin affections, it is invaluable as an ointment.

Should not be applied to the eye when a patient is taking Iodide of Potassium, for it will cause severe inflammation.—*Medical Press*, Oct. 6, 1880.

Dose.—As an alterative, ½ to 1 gr. three times a day; as a purgative, 2 to 8 grs.

(Belg. Calomelas; Fr. Protochlorure de Mercure par volatilisation, also Chlorure Mercureux Precipité; Dan. Chloretum Hydrargyrosum (precipitatum et sublimatum); Austr. and Russ. Hydrargyrum Chloratum Mite, both the levigated and that sublimed into steam; Ger. Hydrargyrum Chloratum, also Hydrargyrum Chloratum vapore paratum; U.S. Hydrargyri Chloridum Mite.)

The best form for making Calomel into pills is as follows:—2 of Calomel, 1 of soft Manna, 1 of compound Tragacanth powder. When made with mucilage they get very hard by keeping, and if made with conserve are apt to become moist.

INCOMPATIBLES.—Iodide of Potassium, Nitro-Hydrochloric Acid, Hydrocyanic Acid. Solutions of Lime, Potash, or Soda.

Preparations.

LOTIO HYDRARGYRI NIGRA.

Subchloride of Mercury, 3 grs.; Solution of Lime, 1 oz.: mix.
=(about 1 in 146).

(Dan. Aq. Mercurialis Nigra, 1 in 250; Ger. and Russ. Aq. Phagedænica, 1 and 60; not in the others.)

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* The Edinburgh Committee of the British Medical Association determined that neither Mercury, nor Podophyllin, nor Taraxacum, in whatever manner, dose, or form it may be administered, has the slightest influence in increasing the flow of bile from the liver; therefore not cholagogue.

PILULA HYDRARGYRI SUBCHLORIDI COMPOSITA. Bright orange.

Subchloride of Mercury, 1; Sulphurated Antimony, 1; Guaiacum Resin in powder, 2; Castor Oil, 1, or sufficient to form a pill mass: mix. =(1 in 5).

Dose.—5 to 10 grs. as an alterative.

(Belg. Pil. Plummeri, 1 in 3; U.S. Pil. Antimonii Comp. 1 in 4; not in the others.)

UNGUENTUM HYDRARGYRI SUBCHLORIDI. Cream colour. Gets slightly rancid by keeping.

Subchloride of Mercury, 80 grains; Benzoated Lard, 1 oz.: mix. =(about 1 in 6½).

(Not in the other Pharmacopœias.)

Not Official.

Pilula Calomelanos c. Coloc.—Calomel, 1 gr.; Comp. Extract Colocynth, 3½ grs.; Ipecacuanha, ½ gr.; in two pills.—*Middlesex Hospital.*

Pilula Calomelanos c. Jalapâ.—Calomel, 1 gr.; Jalap, 3 grs.; Treacle, *q. s.*: in one pill.—*St. Bartholomew's Hospital.*

Pilula Calomelanos c. Scammonio.—Calomel, 1 gr.; Scammony, 3 grs.; Treacle *q. s.*; in one pill.—*St. Bartholomew's Hospital.*

HYDRARGYRUM AMMONIATUM.

AMMONIATED MERCURY.

Syn. White Precipitate of Mercury.

NH_2HgCl, eq. 251·5.

An opaque white powder.

Solubility: soluble in Hydrochloric Acid. Insoluble in Water, Alcohol, and Ether.

Tests.—Entirely volatilized at a heat below redness. Digested with Caustic Potash, it evolves Ammonia, acquiring a pale yellow colour, and the fluid, filtered and acidulated with Nitric Acid, gives a white precipitate with Nitrate of Silver. It should yield 77·5 per cent. of Metallic Mercury.

(Austr. Hydrarg. bichloratum ammoniatum; Belg. Præcipitatum Album; Dan. Chloretum Amido-hydrargyricum; Ger. Hydrargyrum Præcipitatum Album; Russ. Hydrarg. Amidato-bichloratum; U.S. Hydrarg. Ammoniatum; Ph. Lond. 1788, Calx Hydrargyri Alba; not in Fr.)

Medicinal Properties.

Never given internally. Used in the form of ointment as a stimulating application for chronic skin diseases, as porrigo, impetigo, herpes, and sometimes scabies. The ointment is used for pediculi, but the powder can be used alone or mixed with rose water, and the unpleasantness of greasing the linen avoided.

Preparation.

UNGUENTUM HYDRARGYRI AMMONIATI. Cream colour. [ALTERED.]

Ammoniated Mercury, 1; Simple Ointment, 9: mix. =(1 in 10).

The strength of this is now reduced from 1 in 8 to 1 in 10.

(U.S. 1 in 10; Ger. Ung. Hydrargyri Album, and Russ. Ung. Hydr. Præcipitati Albi, 1 in 9; not in the others.)

HYDRARGYRUM CUM CRETA.

MERCURY WITH CHALK.

Syn. GREY POWDER.

Mercury (by weight), 1; Prepared Chalk, 2:[*] triturate till the globules disappear. =(1 in 3).

A powder of a light-grey colour. Free from grittiness.

Insoluble in Water.

Test.—When treated with diluted Hydrochloric Acid, part is dissolved, leaving the Mercury in a finely divided state, the solution is not precipitated with Stannous Chloride (Mercuric Oxide).

Best given by itself, or with rhubarb or other powder, as when rubbed with hard extract to form a pill, the Mercury sometimes separates in globules.

Dose.—3 to 8 grs.

(U.S. 3·8 in 10; not in the others.)

INCOMPATIBLES.—Acids and Acidulous Salts.

Not Official.

HYDRASTIS, U.S.

The rhizome and rootlets of Hydrastis Canadensis.

Preparations.

EXTRACTUM HYDRASTIS FLUIDUM, U.S. Prepared with Diluted Alcohol so that 1 fl. oz. equals 1 oz. of Hydrastis.

Dr. Shoemaker has used the fluid extract as a stimulant and a stringent application in skin diseases.

TINCTURA HYDRASTIS, U.S. Hydrastis, in No. 60 powder, 2; Diluted Alcohol sufficient to percolate, 10.

HYDRASTIN. An eclectic remedy, which is said to be identical with Muriate of Berberine.

It is a moderately powerful stimulant of the liver and a feeble stimulant of the intestines.—Dr. Rutherford.

HYOSCYAMI FOLIA.

HENBANE LEAVES.

The fresh leaves and flowers with the branches to which they are attached of the indigenous biennial plant *Hyoscyamus niger*, Henbane; collected from wild or cultivated plants growing in Britain when about two-thirds of the flowers are expanded. Also the leaves ONLY, and flowering tops carefully dried.

Its properties are completely extracted by Alcohol. The leaves yield by destructive distillation a very poisonous oil. The plant yields a crystalline alkaloid, which is best obtained from the seeds or from the root, the pure alkaloid and the sulphate, both in white crystals.

The biennial plant in the first year presents only a tuft of leaves; these die, and leave not a trace of the plant above ground in the winter; they spring again in April, and produce a stem; the leaves and the branches of this are used in medicine.

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[*] Instead of the 2 of Chalk, 1½, with ½ of Sugar of Milk, is recommended in the *Ph. Journal*, March, 1860, and again June 24, 1876.

Medicinal Properties.

Narcotic. Similar in action to Belladonna and Stramonium, but milder. Used as a sedative in excited states of the nervous system when Opium, from its constipating properties, is not advisable. It is also employed to diminish pain and allay irritation of the bladder, and to prevent the griping of purgative medicines. The fresh leaves are sometimes used as a cataplasm, or as a fomentation to allay pain in ulcers and tumours, and in gouty and rheumatic swellings. The juice of the plant dilates the pupil of the eye.

(Austr. Ger. and U.S. Leaves; Belg. Dan. and Russ. Leaves and Seeds; Fr. Jusquiame noire, Leaves and Seeds.)

INCOMPATIBLES.—Vegetable Acids, Nitrate of Silver, Acetate of Lead, Liquor Potassæ or Sodæ.

ANTIDOTES.—The stomach pump, emetics, external and internal stimulants, Lemon Juice.

According to the statement of some eminent writers, a large dose of Hyoscyamus may be taken with impunity.

Preparations.

EXTRACTUM HYOSCYAMI. Black.

The expressed juice of the leaves and young branches of the fresh plant treated as directed in Extract of Belladonna, and evaporated to an extract at a temperature not exceeding 140° F. (60° C.)

100 lbs. leaves produce 50 lbs. juice = 5 lbs. Extract.
100 lbs. leaves, dried, weigh 15½ lbs.
100 lbs. freshly picked leaves, when dried, yield only 11 lbs.

Dose.—3 to 6 grs.

(Austr. juice from fresh Leaves, freed from Albumen and evaporated; Belg. juice from fresh Leaves, evaporated and mixed with an equal quantity of alcohol, filtered and evaporated; Dan. made from Leaves with weak Spirit; Ger. made with Water and Spirit from fresh Leaves and Stalks; Russ. made from Leaves with Water and Spirit; Fr. clarified juice from Leaves evaporated, also alcoholic extract from the Seeds; U.S. Abstractum (alcoholic), also an alcoholic extract from the powder of the Leaf, and a liquid extract from the same.)

SUCCUS HYOSCYAMI.

Freshly expressed juice, 3; Rectified Spirit, 1: mix and set aside seven days, then filter. Keep in a cool place.

Dose.—½ to 1 drm.

TINCTURA HYOSCYAMI. Intense greenish-brown.

Henbane leaves or flowering tops in No. 20 powder, 1; Proof Spirit, 8: macerate forty-eight hours with 6 of the spirit, pack in a percolator, and when it has drained pour on the remaining spirit, and when it ceases to drop, press, and filter and add proof spirit to make up 8. =(1 in 8).

Dose.—15 to 60 minims; 4 drms. have been given in severe insomnolence.

(Fr. 1 in 5, also Ethereal, and Alcoolature with fresh Leaves and Spirit, equal weights; Belg. 1 in 5, also fresh herb and Alcohol equal weights; Russ. 1 and 10; U.S. by percolation, 15 in 100; all by weight; not in the others.)

Not Official.

Hyoscyamus was unusually fine in 1878, and the Author prepared a Tincture of 6 lbs. of fresh leaves, gathered from the stalk, on the spot, and at once cut small and placed in a 200 oz. bottle with 2 lbs. weight of Rectified Spirit, and digested 7 days; the proportions are weaker than P. B., but the aroma is much superior, and the effect more calming.

The plants of the first year's growth being equally fine, he directed the roots of these to be dug up in the spring and dried. The following preparations have been made, and the root of Hyoscyamus promises to be as useful as the Belladonna root introduced by the Author in 1860.

Chloroformum Hyoscyami.—Hyoscyamus Root, in powder, 20; Chloroform sufficient to percolate 20.

Liniment. Hyoscyami.—Hyoscyamus Root, in powder, 30; Rectified Spirit, 20; digest 4 days, and place in a percolator; add Spirit enough to percolate 30.

Liniment. Hyoscyami Comp.—Liniment. Hyoscyami, 7; Chloroform. Hyoscyami, 1: mix.

The Compound Liniment, applied on piline as directed for Lin. Bellad. Comp., has been found most useful in relieving difficult cases of rheumatism.

Tinct. Radic. Hyoscyami.—Hyoscyamus Root, in powder, 5; Proof Spirit, 40: digest 7 days. Dose 20 to 60 mins.

Dr. Gee, of St. Bartholomew's Hospital, tried the effect of Tincture made from the fresh and dried leaves, from the seeds, and from the dried root; he found that made from the root the most active; he has also tried Hyoscyamine—$\frac{1}{16}$ of a grain injected subcutaneously never fails to produce in a strong man great giddiness, dryness of the mouth and throat, and acceleration of the pulse in a quarter of an hour.

Hyoscyamine, $C_{17} H_{23} NO_3$.—An Alkaloid obtained from the seeds of *Hyoscyamus Niger*, isomeric with Atropine but not regarded as identical with it. It crystallizes in silky needles. There are good reasons for believing that Daturine and Duboisine are identical with Hyoscyamine.

Sulphate of Hyoscyamine.—Occurs in minute crystals which are soluble in water.

ICHTHYOCOLLA.

ISINGLASS.

The swimming bladder or sound of various species of Acipenser, prepared and cut into fine shreds.

This is included among the tests of the British Pharmacopœia.

This well-known substance was in the early London Pharmacopœias, and called Ising-glass or Fish glue; it was used in medicine as a nutrient. It is still to be found in the Pharmacopœias of Austria, Belgium, Denmark, France, Russia, and the United States of America. It is used for fining Wine, for which purpose gelatine does not answer.

(Austr. Belg. Dan. Fr. Russ. and U.S.; not in Ger.)

Isinglass Plaster, introduced by the celebrated surgeon Mr. Liston, is called by his name, and when made by Mrs. Puckeridge was a most useful plaster, enabling the surgeon to see how his wound was progressing without removing the plaster, and occupying so little room, that a supply could be carried in a card-case or purse, and at once applied to a cut or scratch the moment required.

Isinglass is used for Court Plaster and gold-beater's skin.

Test.—Isinglass is not soluble in cold water; Gelatine is. (Dr. Aquilla Smith.)

Isinglass 15 grs. to the oz. of Glycerine. Useful in some skin diseases.

Not Official.

ICHTHYOL.

A tar-like substance, partly soluble in Alcohol and Ether, entirely in a mixture of both.

Medicinal Properties.

It is stated to have remarkable effects in eczema. May be mixed with Soft Paraffin or Lard in the proportion of 20 to 30 per cent. decreased to 10 per cent. for moist eczema, and 50 per cent. reduced to 10 per cent. for the papillary condition. The hand requires a stronger preparation than the face, and children a weaker one than adults.

The following formula is recommended:—Litharge, 10; Acetic Acid, 30: boil down to 20, add Olive Oil, Lard, and Ichthyol of each 10, all by weight, to make an ointment.—*Lancet*, February 24, 1883, p. 334.

It is not without danger, as an application of 1 Ichthyol and 5 Vaseline to a child four years old produced stupor for twelve hours, but it completely recovered.—*Brit. Med. Journ.*, November 22, 1884, p. 1013.

Not Official.

IGNATIA AMARA.

THE SEED OF STRYCHNOS IGNATII.

EXTRACTUM.—Prepared by percolating Ignatia beans in fine powder, with Spirit, and evaporation.

Given in debility of the digestive organs.

Dose—½ to 1 gr. in a pill three times a day.

(U.S. Abstract and Tincture; not in the others.)

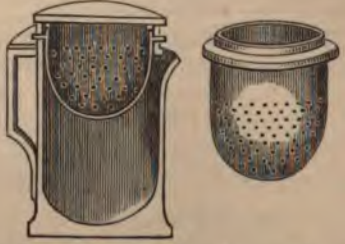
INFUSA.

INFUSIONS.

Infusions, though generally made with boiling water, are in some cases ordered to be made at a lower temperature, as Infusum Calumbæ, the starch of which would be dissolved by boiling water. The mucilage and vegetable albumen present are, however, dissolved by cold water, and these render the infusion liable to change.

The Infusion Pot, invented by the Author and placed in the Exhibition of 1851, answers well for Infusions if proper sizes are used for the quantities ordered, so that the ingredients are held by the perforated basin in the upper part of the fluid and *under the surface*. The impregnated fluid becoming of greater density falls to the bottom, thus exposing the ingredients constantly to the continued action of fresh unimpregnated fluid until the action ceases, and the soluble matter is most effectually extracted. *When hot infusions are made, boiling water should be first poured into the pot, to thoroughly warm it; this being thrown out, the ingredients are put into the colander, and the requisite quantity of boiling water poured upon them. The new pots have the directions for use enamelled upon them.*

The annexed section of the Infusion Pot will show its construction:—



Concentrated Infusions are very largely used by general practitioners and some chemists; although very convenient and economical they have not the aroma of the freshly made infusion.

Infusions are very apt to change in hot weather, and several means have been proposed to preserve them. Small bottles filled to the brim with recently made infusion, and placed in a boiler with hay and water, are kept at the boiling-point for five minutes, then tied over with a bladder, or stoppered whilst hot. Infusions thus treated are preserved good for several weeks. Inf. Gentian. Co., Inf. Aurant. Co., so treated, kept good for three months. Infusion of Senna, which would change in twelve hours in hot weather, will keep for several days perfectly good if one grain of Nitre be dissolved in each ounce of the infusion.

The following are the Infusions of the British Pharmacopœia. The full formulas for these Infusions will be found under the names of the substances from which they are prepared.

It has been thought desirable, for the convenience of the dispenser, to add a table of the ingredients and time required.

Boiling Distilled Water is to be used, unless otherwise stated.

INFUSUM ANTHEMIDIS	½ oz.	Water 10 oz.	Infuse ¼ hour and strain
INF. AURANTII (peel cut small)	½ oz.	10	¼ „ „
INF. AURANTII COMP. Bitter Orange Peel, cut small Fresh Lemon Peel, cut small Cloves (bruised)	 ¼ oz. 56 grs. 28 grs.	10	¼ „ „
INF. BUCHU (leaves bruised)	½ oz.	10	½ „ „
INF. CALUMBÆ (cut small)	½ oz.	cold 10	½ „ „
INF. CARYOPHYLLI (bruised)	¼ oz.	10	½ „ „
INF. CASCARILLÆ (No. 20 powder)	1 oz.	10	½ „ „
INF. CATECHU (coarse powder) Cinnamon (bruised)	160 grs. 30 grs.	10	½ „ „
INF. CHIRATÆ (cut small)	¼ oz.	120° F. 10	½ „ „
INF. CINCHONÆ ACIDUM. Red Cinchona Bark in No. 40 powder Aromatic Sulphuric Acid	 ½ oz. 1 drm.	10	1 „ „
INF. CUSPARIÆ (No. 40 powder)	½ oz.	120° F. 10	1 „ „
INF. CUSSO (coarse powder)	¼ oz.	4	¼ *hour, not strained.*
INF. DIGITALIS (dried leaves)	28 grs.	10	¼ hour and strain.
INF. ERGOTÆ (crushed)	¼ oz.	10	½ „ „
INF. GENTIANÆ COMP. Gentian Root (sliced) Bitter Orange Peel (cut small) Fresh Lemon Peel (cut small)	 55 grs. 55 grs. ¼ oz.	10	½ „ „
INF. JABORANDI (cut small)	½ oz.	10	½ „ „
INF. KRAMERIÆ (No. 40 powder)	½ oz.	10	½ „ „
INF. LINI . . . . . Linseed Dried Liquorice Root (No. 20 powder)	150 grs. 50 grs.	10	2 „ „
INF. LUPULI	½ oz.	10	1 „ „
INF. MATICÆ (cut small)	½ oz.	10	½ „ „
INF. QUASSIÆ (chips)	55 grs.	cold 10	½ „ „
INF. RHEI (sliced)	¼ oz.	10	½ „ „

INF. ROSÆ ACIDUM (broken petals) ¼ oz. Dil. Sulph. Acid 1 drm. . .	Water 10	Infuse ½	hour and strain.
INF. SENEGÆ (No. 20 powder) ½ oz. . . .	10 . . .	½	,, ,,
INF. SENNÆ . . . . (Senna) 1 oz. Ginger (sliced) 28 grs. . .	10 . . .	½	,, ,,
INF. SERPENTARIÆ (No. 20 pow.) ¼ oz. . . .	10 . . .	½	,, ,,
INF. UVÆ URSI (bruised) . . ½ oz. . . .	10 . . .	1	,, ,,
INF. VALERIANÆ (bruised) . . ¼ oz. . . .	10 . . .	1	,, ,,

General Directions given in German Pharmacopœia.—Infusions, for which the amount of the respective substances is not specified, are prepared so that 10 parts of strained product are obtained from 1 part of substance. In the case of substances for which a limit of dose is given the quantity of substance is to be specified by the physician.

Directions in United States Pharmacopœia.—An ordinary Infusion, the strength of which is not directed by the physician nor specified by the Pharmacopœia, shall be prepared as follows:—Put 10 of the substance into a suitable vessel, provided with a cover, pour upon it 100 of boiling water, and let it stand two hours; then strain and pass enough water through the strainer to make the Infusion weigh 100 parts. The strength of Infusions of energetic or powerful substances should be specially prescribed by the physician.

INJECTIONES HYPODERMICÆ.

HYPODERMIC INJECTIONS.

The following are now contained in the British Pharmacopœia, the formulas for which will be found under the names of the substances from which they are prepared:—

INJECTIO APOMORPHINÆ HYPODERMICA .	2 grs. in 100 minims.
INJECTIO ERGOTINI HYPODERMICÆ	about 1 ,, 3 ,,
INJECTIO MORPHINÆ HYPODERMICÆ . .	1 ,, 10 ,,

IODOFORMUM.

IODOFORM.

CHI_3, eq. 394.

[NEW.]

A product of the action of Iodine on a mixture of Alcohol and Solution of Carbonate of Potassium.

Now included in B. P.; was a Not Official in Companion 1869.

A yellow crystalline substance, which occurs in minute scales, also in the form of powder. It has a peculiar odour. Its solutions have a neutral reaction.

Solubility: very sparingly soluble in Water; 1 in 7 of Ether; 1 in 14 of Chloroform; 1 in 120 of Rectified Spirit. It is also soluble in the fixed and volatile oils, and about 1 in 100 of Glycerine; 1 in 30 of Olive Oil; 1 in 3⅓ of Bisulphide of Carbon; sparingly in Benzin.

Tests.—When heated it first melts to a brown liquid, then gives off brown and violet vapours, leaving a black residue which entirely disappears on continued ignition. Warmed with an alcoholic solution of Potash (Formate and Iodide of Potassium result), and from the resulting fluid when acidified with Nitric Acid, Iodine is liberated, the mixture acquiring a brown colour, or when cold a blue colour, on the addition of Mucilage of Starch.

Medicinal Properties.

Used to relieve cancer and abate the progress of the disease; to relieve sciatica and neuralgia; also useful in chancres or syphilitic sores, the powder being applied, or an ointment (1 drm. to 1 oz. of Lard).

A good application is made by dissolving 1 of Iodoform in 10 of Collodion.

As an antiseptic, Iodoform in fine powder is used as a spray; Gauze and Cotton Wool are prepared containing 5, 10, and 20 per cent. of Iodoform, for antiseptic dressings.

It is not recommended to be applied to inflamed tissues.

Eucalyptus Oil, Balsam of Peru, and Coumarin prepared from Tonka beans have been used to cover the smell of Iodoform.

Dose.—1 to 3 grains; the Iodoform should be finely powdered, or, still better, use precipitated Iodoform, and at least twenty times its weight of mucilage employed to make it miscible with water; or it may be given in the form of pills, made with equal parts Glucose and Treacle.

(Belg. Fr. Ger. Russ. and U.S; not in the others.)

Preparations.

SUPPOSITORIA IODOFORMI. [NEW.]

Iodoform, in powder, 36 grs.; Oil of Theobroma, 144 grs.: rub the Iodoform with 44 grs. of the Oil of Theobroma in a slightly warmed mortar, and add this to the remainder of the Oil of Theobroma previously melted at a low temperature: mix thoroughly, and pour into moulds of the capacity of 15 grs.

Each suppository contains 3 grs. of Iodoform.

UNGUENTUM IODOFORMI. [NEW.]

Iodoform, 1; Benzoated Lard, 9: melt the Lard at a low temperature, add the Iodoform, and stir together until dissolved and finally cooled.

(U.S. 1 in 10; not in the others.)

Not Official.

IODOFORM AND EUCALYPTUS BOUGIES FOR GONORRHŒA (Cheyne).—Iodoform, 5 grs.; Oil of Eucalyptus, 10 minims; Oil of Theobroma, 35 grs. in each bougie, which should be 4 inches long and the diameter of No. 10 catheter.

Treatment.—The patient to pass water, then lie on his back, introduce the bougie (first dipped in Eucalyptus Oil or Carbolic Oil (1 in 20)), close the orifice with pad of Boracic Lint covered with Gutta-percha tissue, secure in position with strapping. The patient should refrain from passing water for four or five hours. If the case be severe the introduction of the bougie is repeated after passing water. The next day use an injection of Sulphocarbolate of Zinc, 2 grs. to 1 oz., for two or three days; and on the third or fourth day, when the symptons have entirely subsided, use an injection of Sulphate of Zinc, 2 grs. to 1 oz. The treatment can be commenced as early as the first day or as late as the seventh day of the disease. The patient must abstain from alcohol.—*B. M. J.*, 1880, ii. p. 125; *Lancet*, 1882, ii. pp. 176, 213.

IODUM.

IODINE.

I, eq. 127.

A non-metallic element, obtained principally from the ashes of seaweeds, in the western islands of Scotland and Ireland; is also largely manufactured in France; also from mineral Iodides and Iodates.

Sublimed in laminar crystals of a dark colour and metallic lustre, and of peculiar odour.

Solubility: 1 in 7000 of Water; 1 in 12 of Rectified Spirit; 1 in 4 of Ether; 1 in 25 of Chloroform; 1 in 6 of Bisulphide of Carbon; 1 in 65 of Glycerine; soluble in a solution of Iodide of Potassium.

Tests.—Entirely soluble in Ether. It sublimes without leaving any residue, and the portion which first comes over does not include any slender colourless prisms, emitting a pungent odour (Cyanide of Iodine). 12·7 grains dissolved in 1 ounce of Water containing 15 grains of Iodide of Potassium require for complete decoloration 1000 grain-measures of the volumetric solution of Hyposulphite of Sodium; *i.e.* to change the whole of the equivalent 12·7 grains of Iodine into colourless Iodide and Tetrathionate of Sodium.

Medicinal Properties.

It acts specially as a stimulant to the entire lymphatic system, causing absorption, promoting elimination by the kidneys, acting as an antidote to certain blood poisons, organic and inorganic, as syphilis and lead poisoning. Also in chronic inflammation, to promote absorption and elimination in dropsies and chronic rheumatism. Most efficacious in glandular enlargements and morbid growths, as in bronchocele, scrofulous glands of the neck and abdomen, as an alterative in obstinate mucous discharges; caution, however, being used, as it may occasion wasting in healthy glands, such as the mammæ and testes. Externally, in chronic skin diseases, and over-enlarged and indurated parts and diseased joints, to cause absorption. A few drops of the tincture in half a pint of hot water may be inhaled in some forms of chronic bronchitis and phthisis. Best administered in the form of tincture, largely diluted with water. The skin coloured by iodine can be rendered colourless again by a saturated solution of Hyposulphite of Sodium.

Dose.—Of free Iodine, ½ gr., gradually increasing.

(In all the Pharmacopœias.)

Contained in Pilula Ferri Iodidi and Syrupus Ferri Iodidi.

The Iodides of Arsenic, Mercury, Potassium, Sodium, and Sulphur are official; those of Cadmium, Iron, and Zinc are not official.

INCOMPATIBLES.—Ammonia, Metallic Salts, Mineral Acids, Vegetable Alkaloids.

ANTIDOTES.—Emetics aided by Demulcent Drinks, Starch, Flour, etc., diffused in water; Hypodermic Injection of Morphia to relieve pain.

Preparations.

LINIMENTUM IODI. Intense blood colour. [ALTERED.]

Iodine, 5; Iodide of Potassium, 2; Glycerine, 1; Rectified Spirit, 40: dissolve. =(about 1 of Iodine in 9).

Glycerine has been introduced in the place of Camphor.

(Not in the other Pharmacopœias.)

Proper strength to paint upon bursæ and enlarged glands.

LIQUOR IODI. Deep blood colour. [ALTERED.]

Iodine, 22 grs.; Iodide of Potassium, 33 grs.; Distilled Water, sufficient to produce 1 fl. oz. =(1 of Iodine in 20).

The strength has been slightly increased, from 20 to 22 grs.

(Fr. Soluté d'Iode Ioduré, Iodine 1, Iodide of Potassium 1, Alcohol 10, Water 18; Russ. Liquor Iodi cum Kalio Iodato, Iodine 1, Iodide of Potassium 2, Distilled Water 97; U.S. Liquor Iodi Co., Iodine 1, Iodide of Potassium 2, Distilled Water 17; all by weight; not in the others.)

TINCTURA IODI. Intense brown-red. [ALTERED.]

Iodine, ½; Iodide of Potassium, ½; Rectified Spirit, 20: dissolve.
=(1 of Iodine in 40).

The quantity of Iodide of Potassium has been doubled.

Dose.—5 to 20 minims. Also an excellent application to the throat in diphtheria.

(The following without the Iodide of Potassium:—Austr. 1 and 16; Belg. 1 in 12·5; Fr. 1 and 12; Dan. Sol. Iodi Spirituosa, 1 in 20; Ger. and Russ. 1 and 10; U.S. 1 and 12·5. All by weight.)

Hyposulphite of Sodium decolorizes Solutions of Iodine.

UNGUENTUM IODI. Deep brown. [MODIFIED.]

Iodine, 32 grs.; Iodide of Potassium, 32 grs.; Glycerine, 1 drm.: rub together, add Prepared Lard, 2 oz., and mix.
=(1 of Iodine in 31).

Glycerine has been substituted for Proof Spirit.

(Fr. Pommade d'Iodure de Potassium Ioduré, Iodine 1, Iodide of Potassium 5, Benzoated Lard 40, Water 5; U.S. Iodine 4, Iodide of Potassium 1, Water 2, Benzoinated Lard 93: mix; not in the others.)

VAPOR IODI. INHALATION OF IODINE.

Tincture of Iodine, 1 drm.; Water, 1 oz.; mix in a suitable apparatus, and having applied a gentle heat, let the vapour that rises be inhaled.

(Not in the other Pharmacopœias.)

Not Official.

INHALATIO IODI C. CONIO.—½ drm. to 1 drm. of Succus Conii being added to the above Vapor Iodi.

GLYCERINUM IODI.—Iodide of Potassium, 1; Glycerine 2: dissolve, and add Iodine, 1; shake till dissolved. When diluted, is injected for Hydrocele with success.

GARGARISMA IODI (St. Thomas's Hospital).—Tincture of Iodine, 2 drms.; Water, 5 oz.: mix. (In ulceration of the tonsils.)

LIQUOR AMMONIÆ IODIDI (Sir J. Y. Simpson).—Liq. Ammon. Fortiss., 2 oz.; Iodine, 10 grs.; Iodide of Potassium, 20 grs.; Rectified Spirit, 1 oz.: dissolve.

LOTIO IODI COMP.—Iodine, 1 dr.; Iodide of Potassium, 4 scruples; Water 1 oz. —*St. George's Hospital.*

LUGOL'S SOLUTION.—Iodine, 20 grs.; Iodide of Potassium, 30 grs.; Water 1 oz.: dissolve. Dose, 6 minims twice a day, gradually increasing the dose to 20 minims.

LUGOL'S CAUSTIC.—Iodine, 60 grs.; Iodide of Potassium, 60 grs.; Water, 2 drms.

MISTURA IODI COMP.—Tincture of Iodine, 8 minims; Iodide of Potassium, 5 grs.; Cinnamon Water to 1 oz.—*Charing Cross Hospital.*

TINCTURA IODI DECOLORATA (Russ.).—Iodine, 10; Hyposulphite of Soda, 10; Distilled Water, 10: dissolve and add Alcohol Ammonia, sp. g. 0·808 (10 per cent.), 16. Agitate, and then add Alcohol (sp. g. ·830—·834) 75; all by weight; set aside three days and filter.

IPECACUANHA.

IPECACUANHA.

The dried root of *Cephaëlis Ipecacuanha*, from Brazil. The active principle resides in the bark, the inner or woody part possessing scarcely any of its virtues.

Ipecacuanha contains an Alkaloid, *Emetine*, separable as a whitish amorphous powder; which assumes an intense and permanently yellow colour with solution of Chlorinated Lime and Acetic Acid.

This test applied to powder of Ipecacuanha will turn it yellow.

Medicinal Properties.

Emetic in large doses. In small doses it becomes absorbed and acts upon the different mucous surfaces, especially of the respiratory organs, and is therefore expectorant. It is diaphoretic and laxative; also sedative to the vascular system. Given in agues, to prevent the paroxysm. Ipecacuanha has long since been relied on in the East for the cure of dysentery in the acute stage. When the evacuations are frequent and accompanied with mucus, 20 to 30 grains are given; and if the stomach rejects it, a little opium is given with it, or a mustard poultice applied to the stomach.

Is a powerful hepatic stimulant, it increases slightly the secretion of intestinal mucus, but has no other apparent stimulant effect on the intestines.—Dr. Rutherford.

Applied to the bites and stings of insects.

Dose.—In powder as an emetic, 15 to 30 grs.; as an expectorant, etc., ½ to 2 grs.

(In all the Pharmacopœias.)

Prescribed in ¼ to 1 gr. doses as an auxiliary in alterative pills.

Contained in Pil. Conii Comp.

INCOMPATIBLES.—Salts of Lead, Mercury, Vegetable Acids, Astringent Infusions.

Preparations.

PILULA IPECACUANHÆ CUM SCILLA. Brown.

Compound powder of Ipecacuanha, 3; Squill, in powder, 1; Ammoniacum, in powder, 1; Treacle, *q. s.*

=(3 Dover's Powder in 7, or about 1 of Opium in 23).

Dose.—5 to 10 grs.

(Not in the other Pharmacopœias.)

PULVIS IPECACUANHÆ COMPOSITUS. Light fawn colour. *Syn.* PULVIS IPECACUANHÆ CUM OPIO; PULVIS DOVERI.

Ipecacuanha, in powder, 1; Opium, in powder, 1; Sulphate of Potassium, 8 : mix. =(1 Opium, 1 Ipecac. in 10).

Dose.—5 to 10 grs.

(In all the Pharmacopœias, and is the well-known Dover's Powder; Austr. Pulv. Doveri, with Sugar instead of Sulphate of Potash; Dan. Pulv. Ipecac. Thebaicus; Fr. Poudre d'Ipecacuanha Opiacée; Ger. and Russ. Pulvis Ipecacuanhæ Opiatus; U.S. Pulv. Ipecac. et Opii; all same strength as Brit.; Belg. 9 *Extract* Opium, 9 Ipecac., in 100.)

The original Powder of Dr. Dover was prepared by fusing together 4 parts of Nitrate of Potash with 4 of Sulphate of Potash, and reducing the product to fine powder; to this was added 1 of Ipecacuanha, 1 of Opium, and 1 of Liquorice; the French Codex has now made it same strength as British; the Belgian still retains the powdered Extract of Opium instead of Opium itself, which nearly doubles the strength.

An admirable anodyne diaphoretic; it is also most useful in dysentery and diarrhœa; in the latter case it is sometimes combined with Calomel.

3 or 4 grs. will relieve heartburn, probably by allaying irritability.

TROCHISCI IPECACUANHÆ. Buff colour.

¼ gr. of Ipecacuanha in each lozenge.

Dose.—1 to 3 lozenges.

(Austr. 1⁄12 grain; Belg. and Dan. about ¼ grain; Fr. about ⅐ grain; Russ. about ⅕ grain; U.S. ¼ grain.)

TROCHISCI IPECACUANHÆ ET MORPHINÆ. Cream colour.

Ipecacuanha $\frac{1}{12}$ gr., Hydrochlorate of Morphia $\frac{1}{36}$ gr., in each lozenge.

Dose.—1 to 6 lozenges.

(U.S. Ipecac. $\frac{2}{25}$ gr., Sulphate of Morphine $\frac{1}{40}$ gr., in each.)

VINUM IPECACUANHÆ. [ALTERED.]

Ipecacuanha, in coarse powder, 1; Acetic Acid, 1; Distilled Water, *q. s.*; Sherry, 20: macerate the Ipecacuanha in the Acetic Acid twenty-four hours; pack in a percolator, and pass sufficient Distilled Water through to produce 20; evaporate the liquor to dryness over a water bath. Powder the residue and macerate it in the Sherry forty-eight hours, with occasional agitation, and filter. =(1 in 20).

Note.—If the directions are followed there is no difficulty in carrying out the process, which, however, differs considerably from that of former Pharmacopœias.

Dose.—As an expectorant, etc., 5 to 40 minims; as an emetic, 3 to 6 drms.

(Belg. 6 in 100; Dan. Ger. and Russ. 1 and 10; U.S. 7 fluid Extract, and 93 Sherry; not in the others.)

Not Official.

SYRUPUS IPECACUANHÆ.

Belg.—Tincture of Ipecacuanha, 35; Simple Syrup, 1000.

Fr.—Alcoholic Extract of Ipecacuanha, 10; Alcohol (à 60), 30; Water, 340; Sugar, 630.

Ger.—Bruised Ipecacuanha, 1; Rectified Spirit, 5; Water, 40: digest forty-eight hours, and filter 40; add 60 of Sugar, and dissolve to make 100 of Syrup.

U.S.—Fluid Extract of Ipecacuanha, 5; Syrup, 95.

All by weight.

Tinctura Ipecacuanhæ (Ger. and Russ.).—Bruised Ipecacuanha, 1; Proof Spirit, 10 (by weight): digest eight days, press, and make up to 10.

(Austr. Belg. and Fr. 1 and 5; not in the others.)

Haustus Ipecacuanhæ Comp.—Ipecacuanha Wine, 10 minims; Paregoric, 30 minims; Sp. Mindererus, 3 drms.; Water to 1 oz.—*Middlesex Hospital.*

Haustus Ipecacuanhæ et Ammoniæ.—Carbonate of Ammonia, 10 grs.; Ipecacuanha Wine, 15 minims; Chlorate of Potash, 20 grs.; Water 1 oz.—*Fever Hospital.*

JABORANDI.

JABORANDI.

[NEW.]

The dried leaflets of *Pilocarpus pinnatifolius.*

(Fr.; Ger.; Russ.; U.S. (Pilocarpus.); not in the others.)

Now official in B. P.; was a Not Official in Companion 1880.

Medicinal Properties.

It is antagonistic in its action to Belladonna.

It causes profuse perspiration, and increases the flow of the saliva.—*B.M.J.*, April 24, 1875.

$\frac{1}{20}$ gr. Pilocarpine three times a day given in diabetes.—*Lancet*, Aug., 1884, p. 275.

Is a very feeble hepatic stimulant.—Dr. Rutherford.

Preparations.

EXTRACTUM JABORANDI. [NEW.]

Macerate 16 of Jaborandi, in No. 40 powder, with 40 of Proof Spirit for forty-eight hours; then transfer to a percolator, and when the fluid ceases to pass continue the percolation with Water until 40 of liquid has been collected; evaporate the percolated liquid to a suitable consistence.

Dose.—2 to 10 grs.

(Belg.; not in the others.)

INFUSUM JABORANDI. [NEW.]

Jaborandi, cut small, 1; Boiling Distilled Water, 20: infuse half an hour and strain. =(1 in 20).

Dose.—1 to 2 oz.

TINCTURA JABORANDI. [NEW.]

Jaborandi, in No. 40 powder, 5; Proof Spirit, 20: macerate for forty-eight hours in ¾ of the Spirit, agitating occasionally; pack in a percolator; when it ceases to drop pour on the remaining Spirit; press the marc, filter, and add Proof Spirit to make 20. =(1 in 4).

(Belg. Ger. and Russ. 1 and 5; not in the others.)

Dose.—30 to 60 minims.

PILOCARPINÆ NITRAS. See p. 262.

JALAPA.

JALAP.

The dried tubercules of *Ipomœa Purga;* imported from Mexico.

Test.—Treated as for the preparation of Resin of Jalap, not less than 10 per cent. of Resin should be obtained, of which not more than $\frac{1}{10}$ should be soluble in Ether.

Medicinal Properties.

A brisk cathartic, operating sometimes painfully, producing copious watery discharges. From its hydragogic powers, it is especially applicable to dropsy, when it is usually combined with Bitartrate of Potassium or Calomel.

(In all the Pharmacopœias.)

Is a moderately powerful hepatic, and a powerful intestinal stimulant.—Dr. Rutherford.

Dose.—10 to 30 grs.

Contained in Pulvis Scammonii Compositus.

Preparations.

EXTRACTUM JALAPÆ. Intense brown.

Jalap, in coarse powder, 1; Rectified Spirit, 5; Distilled Water, 10: macerate the Jalap in the spirit for seven days, press out the tincture, then filter and distil off the spirit, leaving a soft extract: again macerate the residual Jalap in the water for four hours, express, strain through flannel, and evaporate by a water bath to a soft extract; mix the two extracts, and evaporate at a temperature not exceeding 140° F., to a proper consistence for forming pills.

100 lbs. of Jalap yield 50 lbs. of extract.

Dose.—5 to 15 grs.

(U.S. Abstractum; not in the other Pharmacopœias.)

PULVIS JALAPÆ COMPOSITUS. Light fawn colour.

Jalap, in powder, 5; Acid Tartrate of Potassium, 9; Ginger, in powder, 1: mix. =(1 in 3).

Dose.—20 to 60 grs.

(U.S. Jalap 35, Bitartrate of Potassium 65; not in the others.)

RESINA JALAPÆ. Dark brown, brittle, and shining.

A resin obtained from Jalap, by means of Rectified Spirit.

Digest 8 of Jalap (in No. 40 powder) with 16 of Rectified Spirit in a covered vessel, heating gently, for twenty-four hours; then transfer to a percolator, and when the Tincture ceases to pass continue the percolation with successive portions of Spirit until it ceases to dissolve anything more. Add to the Tincture 4 of Distilled Water, and distil off the Spirit by a water bath. Remove the residue while hot to an open dish and allow it to become cold. Pour off the supernatant liquid from the Resin, wash this two or three times with hot water, and dry it on a porcelain plate by the heat of a stove or water bath.

Test.—The powder yields little or nothing to warm Water, and not more than 10 per cent. to Ether.

Jalap yields from 15 to 20 per cent. of resin.

Easily soluble in Rectified Spirit; insoluble in Oil of Turpentine.

Dose.—2 to 5 grs.

(Austr. Belg. Dan. Fr. Ger. Russ. and U.S.)

Jalapine, once so largely prescribed, is nothing more than this Resin deprived of colour by Animal Charcoal; it may be given in the same dose, and, being in fine division, is less likely to irritate the bowels.

TINCTURA JALAPÆ. Deep reddish-brown.

Jalap, in No. 40 powder, 1; Proof Spirit, 8: macerate forty-eight hours in 6 of the spirit, agitating occasionally, pack in a percolator, and when the fluid ceases to pass, pour on the remaining spirit, press, filter, and add proof spirit to make 8. =(1 in 8).

Dose.—½ to 2 drms.

(Belg. and Fr. 1 in 5 by weight; not in the others.)

Not Official.

Tinctura Jalapæ Resinæ, Russ.—Resin of Jalap, 1; Spirit (90 p. c.), 10.

Sapo Jalapinus, Ger. and Russ.—Resin of Jalap, 2; Soap, 2; Sp. Wine, 4; s.a.

JUNIPERI OLEUM.

OIL OF JUNIPER.

The Oil distilled in Britain from the full grown unripe green fruit of *Juniperus communis.*

Sp. g. ·870 to ·880. Of very superior flavour to the imported Oil.

Solubility in Rectified Spirit, 1 in 20, but it does not become quite clear: it mixes with equal parts of Absolute Alcohol, but if more Alcohol be added it becomes milky.

Medicinal Properties.

Stimulant, carminative, and diuretic, the latter property constituting its chief medicinal value. Used in debilitated dropsical cases, either alone or combined with other diuretics.

Dose.—1 to 3 minims.

(Austr. Belg. sp. g. ·853 to ·911; Fr. (Genièvre), Ger. Russ. and U.S. sp. g. ·870; not in Dan.)

Preparation.

SPIRITUS JUNIPERI. Colourless.

Oil of Juniper, 1; Rectified Spirit, 49: dissolve. =(1 in 50).

Dose.—30 to 60 minims.

(Fr. 1 in 50; Russ. 1 and 96; U.S. 3 in 100, by weight, also a compound spirit; Ger. by distillation; not in Austr. Belg. or Dan.)

Not Official.

OLEUM JUNIPERI EMPYREUMATICUM. OLEUM CADINUM. HUILE DE CADE. JUNIPER TAR. An empyreumatic oil, resembling liquid pitch, obtained by the dry distillation of the wood of the *Juniperus Oxycedrus.*

Used as a stimulant in cases of Psoriasis and of Chronic Eczema.

(Austr. Belg. Dan. Fr. and Russ; not in Ger. or U.S.)

Not Official.

KAIRIN.

A synthetically prepared alkaloid, Oxychinolinemethyl Hydride, $C_{10}H_{13}NO$, the Hydrochlorate of which is readily soluble in Water.

Medicinal Properties.

A powerful antipyretic.

Dose.—·5 gramme = 7½ grains, given in a capsule or wafer every hour in cases of fever.—*Pharm. Jour.*, Nov., 1883, p. 383; *Lancet*, 1883, ii. pp. 344, 552; *Lancet*, 1884, ii. pp. 32, 39, 559.

KAMALA.

KAMALA.

A fine, granular, mobile, orange-red powder, consisting of minute glands and hairs, obtained from the surface of the fruits of *Mallotus phillipinensis;* imported from India.

Solubility: scarcely mixing with water, but about 60 per cent. of a sample containing 6 per cent. of ash was soluble in, and formed a red-coloured solution with, Alcohol, Chloroform, or Ether; for the most part soluble in Liquor Potassæ; sparingly in Benzin.

Test.—Ether dissolves most of it, the residue consisting principally of tufted hairs. On ignition in air it should yield 4 or 5, or at most 10 per cent. of ash. Most commercial samples contain much more than this, from 20 to 50 per cent. of ash.—*Pharm. Jour.*, Feb., 1885, p. 654.

Medicinal Properties.

Purgative. Successfully given in tænia.

Dose.—30 to 120 grs. of the powder suspended in Gruel, Mucilage, Treacle, or Syrup, will of itself expel the worm. A purgative should, however, follow.

(Austr. Ger. (6 p. c. of ash), Russ. and U.S. (8 p. c. of ash); not in the others.)

Not Official.

TINCTURA.—Kamala, 1; Proof Spirit, 5; macerate seven days, and strain.

Dose.—1 to 2 drms.

Not Official.

KAOLIN.

Syn. CHINA CLAY; PORCELAIN CLAY.

A fine white clay, derived from the decomposition of the felspar of granitic rocks; extensive tracts of it occur in Cornwall. When finely ground and washed it is used as a form of Fuller's Earth for infants.

Preparation.

UNGUENTUM KAOLIN.

Vaseline, 1; Paraffin, 1: melt, and add Koalin, 1; stir till cold.

This has been proposed as a basis for pills containing Nitrate of Silver or Permanganate of Potassium.—*Pharm. Jour.*, July, 1884, p. 60.

KINO.

KINO.

The inspissated juice obtained by incisions made in the trunk of *Pterocarpus Marsupium;* imported from the Malabar coast.

In small, angular, brittle, glistening, reddish-black fragments, translucent, and ruby-red on the edges, inodorous, astringent.

Solubility: of 100 grains Tellicherry Kino, only 88 grains are dissolved by cold Water, and 35 grains of Isinglass will precipitate the whole of the astringent matter from the solution. Compared with Pale Catechu it is more soluble in water, and the solution is more astringent.

Almost entirely soluble in Rectified Spirit. It yields little or nothing to Ether.

Medicinal Properties.

A powerful astringent. Employed in obstinate diarrhœa and pyrosis. Also used for intermittents, with Cinchona. Best given in diluted Alcohol. Externally, as a styptic, and in powder to indolent and flabby ulcers.

Dose.—10 to 30 grs.

(Belg. Fr. Russ. and U.S.; not in Austr. Dan. or Ger.)

Contained in Pulvis Catechu Compositus.

Incompatibles.—Mineral Acids, Alkalies and Carbonates, Metallic Salts and Gelatine.

Preparations.

PULVIS KINO COMPOSITUS. Reddish-brown. *Syn.* Pulv. Kino cum Opio.

Kino, in powder, 15; Opium, in powder, 1; Cinnamon, in powder, 4. =(1 Opium in 20).

Keep it in a well-closed vessel.

20 grains contain 1 grain Opium, in powder.

Dose.—5 grs. and upwards, according to the quantity of Opium required.

(Not in the other Pharmacopœias.)

TINCTURA KINO. Intense reddish-brown. [ALTERED.]

Kino, in coarse powder, 2; Glycerine, 3; Distilled Water, 5; Rectified Spirit, 12: macerate seven days, with occasional agitation, filter, and add Rectified Spirit to make 20. =(1 in 10).

Note.—Glycerine and Water have been introduced in the place of some of the Spirit, after the manner of U.S.P. 1882.

Dose.—½ to 2 drms.

(U.S. 1 in 10; Fr. and Russ. 1 and 5, by weight; not in the others.)

KOUSSO. *See* CUSSO.

KRAMERIÆ RADIX.

RHATANY ROOT.

The dried root of Peruvian Rhatany, *Krameria triandra*, or of Savanilla Rhatany, *Krameria Ixina.*

Medicinal Properties.

A powerful astringent; tonic. Used in chronic diarrhœa, passive hemorrhages and mucous discharges, as menorrhagia, leucorrhœa; and generally where Kino and Catechu are beneficial. As a gargle in relaxed sore throat. Locally in prolapsus ani or fistula ani.

Dose.—In powder, 20 to 60 grs.

(In all the Pharmacopœias. Austr. and Russ. Ratanha; Belg. and Ger. Rhatania; Dan. and Fr. Ratanhia; U.S. Krameria.)

Contained in Pulvis Catechu Compositus.

INCOMPATIBLES.—Alkalies, Lime Water, Salts of Iron and Lead, Gelatine.

Preparations.

EXTRACTUM KRAMERIÆ. Reddish-black.

Macerate Rhatany Root, in No. 40 powder, 16, with cold Distilled Water, 30, twenty-four hours, then pack in a percolator and add more Distilled Water until 240 have been collected or the Rhatany is exhausted. Evaporate the liquor by a water bath to dryness.

Dose.—5 to 20 grs.

(Same as Austr. Belg. Dan. Fr. Russ. and U.S.; U.S. has also a fluid extract.)

INFUSUM KRAMERIÆ. [MODIFIED.]

Rhatany Root, in No. 40 powder, 1; boiling Distilled Water, 20: infuse half hour, and strain. =(1 in 20).

The time is reduced from one hour to half an hour.

Dose.—1 to 2 oz.

(Fr. Tisane, 1 in 50; not in the other Pharmacopœias.)

TINCTURA KRAMERIÆ. Deep lake.

Rhatany Root, in No. 40 powder, 1; Proof Spirit, 8: macerate forty-eight hours in 6 of the spirit, agitating occasionally; pack in a percolator; when it ceases to drop, pour on the remaining spirit, press the marc, filter, mix the liquids and add proof spirit to make 8. =(1 in 8).

Dose.—½ to 2 drms.

(Austr. Belg. Dan. Fr. Ger. Russ. and U.S. 1 and 5; all by weight.)

Excellent for the teeth and gums when either spongy or inflamed.

Not Official.

SUPPOSITORIUM.—Extract of Rhatany, 8 grs.; Hydrochlorate of Morphia, $\frac{1}{10}$th gr.; Stearine, 10 grs.

(Fr. 1 gramme in each.)

LOZENGES are made of the Extract for relaxed throat.

(U.S. 1 grain in each.)

LAC.

Fresh milk from the Cow, *Bos Taurus*.

Used only for preparing Mistura Scammonii.

A good report on the milk supply of London, with the analysis of forty samples, will be found in *Medical Times*, January 15, 1870.

Not Official.

ARTIFICIAL HUMAN MILK.

Allow ⅓ of a pint of new milk (cow's) to stand for about twelve hours, remove the cream and add to it ⅔ of a pint of new milk, as fresh from the cow as possible, into the ⅓ of a pint of blue milk left after abstraction of the cream; put a piece of rennet 1 inch square, set the vessel in warm water until the milk is fully curdled, which requires from five to fifteen minutes, the rennet being removed as soon as curdling commences, and put into an egg-cup for future use, as it can be employed daily for a month or two; break up the curd thoroughly, and separate the whole of the whey, which should be rapidly heated to boiling, when a little more casein separates, and may be removed by straining; 110 grs. of powdered milk is to be dissolved in this hot whey, and the sweetened fluid added to the $\frac{2}{3}$ of a pint of new milk.—*Lancet*, 1878, i. p. 390.

LACTUCA.

LETTUCE.

The flowering herb of the wild indigenous plant, *Lactuca virosa*.

Medicinal Properties.

Sedative, narcotic; said also to be gently laxative, powerfully diuretic, and somewhat diaphoretic. Employed in dropsy and in cases of visceral obstruction. Generally combined with Squill, Digitalis, or other diuretics.

Preparations.

EXTRACTUM LACTUCÆ. Intense brown.

The inspissated juice evaporated to a pilular consistence, according to the directions given for Extractum Belladonnæ.

100 lbs. of the plant yield 50 to 55 lbs. juice = 60 to 80 oz. of Extract.

Dose.—5 to 10 grs.

(Same as Belg. Fr. (Laitue) and Ger.; not in the others.)

The extract from the root is stronger than that made from the leaves.

Not Official.

Eau Distillée de Laitue.—From Lettuce flowers, 1 in 1. Fr. Ph.

Succus.—The expressed juice, 3; Rectified Spirit, 1: mix.

Dose.—1 to 2 drms.

Not Official.

LACTUCARIUM.

The juice from the incised flower-stalk of *Lactuca virosa*, collected and dried.

(Belg. Dan. Fr. Ger. Russ. and U.S.; not in Austr.)

Dose.—3 to 8 grs.

Syrupus Lactucarii.—Macerate Lactucarium 1 with Benzin 4 for twenty-four hours, decant the Benzin solution, dry the residue, mix it with an equal bulk of clean dry sand, and exhaust with Proof Spirit to 8; evaporate this Tincture to 6, add Water enough to regain the measure of 8, then dissolve in it Sugar 14, and add Water to make up to 20.

Tinctura Lactucarii.—Lactucarium, 1; Proof Spirit, 10: digest seven days, and filter.

Dose.—30 to 60 minims.

The preparations of Lettuce are highly prized by some practitioners for their sedative qualities, whilst others aver that they are almost inert. The Author believes in their virtues.

LARICIS CORTEX.

LARCH BARK.

The bark of *Pinus Larix;* collected in spring, deprived of its outer portion and dried.

(Not in the other Pharmacopœias.)

Medicinal Properties.

Astringent, gently stimulant, useful in bronchitis with copious expectoration.

Preparation.

TINCTURA LARICIS.

Larch Bark, in No. 40 powder, 1; Rectified Spirit, 8: macerate forty-eight hours in 6 of the spirit, agitating occasionally, pack in a percolator; and when it ceases to drop, pour on the remaining spirit; press the marc, filter, mix the liquids, and add Rectified Spirit to make 8.

Dose.—20 to 30 minims.

LAUROCERASI FOLIA.

CHERRY-LAUREL LEAVES.

The fresh leaves of *Prunus Laurocerasus*, Common or Cherry Laurel.

Preparation.

AQUA LAUROCERASI.

Fresh leaves of Cherry-Laurel, 16; Water, 50: chop the leaves, crush them in a mortar, and put them with the Water into a retort: distil 20 of the liquid, shake the product, filter through paper, and adjust the strength of the finished product, either by addition of Hydrocyanic Acid or by diluting the distillate with Distilled Water, so that 810 grs. of it, tested as described in the process for Diluted Hydrocyanic Acid, shall require 150 grain-measures of the volumetric Solution of Nitrate of Silver to be added before a permanent precipitate begins to form, which corresponds to 0·1 per cent. of real Hydrocyanic Acid. Preserve in a stoppered bottle.

(Austr. Belg. Fr. viz. in every 1000 minims there should be ½ a minim of real Hydrocyanic Acid; Ger. same as Aqua Amygdalarum Amarum, viz. 1 minim of real Hydrocyanic Acid in every 1000 mins.; Russ. 1 in 1000.)

NOTE.—To ascertain if it lost much of its strength by keeping, a sample was taken, which contained ·104 per cent., and placed in a pint bottle about three-quarters full for a month, it then gave ·094 per cent.; the bottle was then kept for a week with only 3 oz. in it, and then gave ·093 per cent.; the same was then kept three days with the cork out, and then gave ·038 per cent.

Medicinal Properties.

Sedative. Similar to Hydrocyanic Acid.

Dose.—20 minims to 2 drms. (20 minims = 1 minim Diluted Hydrocyanic Acid.)

INCOMPATIBLES.—Same as Hydrocyanic Acid.

ANTIDOTES.—In case of overdose, the antidotes should be as directed under Acidum Hydrocyanicum.

LAVANDULÆ OLEUM.

OIL OF LAVENDER.

The oil distilled in Britain from the flowers of *Lavandula vera.*

Sp. gr. Samples of English oil examined were found ·884—·892; samples of foreign oil were ·881—·897.

Soluble in all proportions of Rectified Spirit and Absolute Alcohol; sparingly soluble in Proof Spirit.

(Austr. Belg. Dan. Fr. Ger. Russ. and U.S.)

Medicinal Properties.

An aromatic stimulant and carminative. Useful in hysteria, hypochondriasis, and other nervous affections, also in flatulence and colic. Rarely given in a crude state. Used as an adjuvant to other medicines.

A hank of cotton moistened with it, and placed round the neck, prevents bugs biting that part.

Dose.—1 to 4 minims.

Contained in Linimentum Camphoræ Compositum.

Preparations.

SPIRITUS LAVANDULÆ. Colourless.

Oil of Lavender, 1; Rectified Spirit, 49: dissolve. =(1 in 50).

Dose.—30 to 60 minims.

(Belg. 1 in 100; Russ. 1 in 96; U.S. 3 and 100; all with the oil and by weight; Austr. Dan. and Ger. from the flowers.)

TINCTURA LAVANDULÆ COMPOSITA. Deep lake. *Syn.* SP. LAVAND. COMP.

Oil of Lavender, 90 minims; Oil of Rosemary, 10 minims; Cinnamon Bark, bruised, 150 grs.; Nutmeg, bruised, 150 grs.; Red Sandal-wood, 300 grs.; Rectified Spirit, 40 oz.: macerate the Cinnamon, Nutmeg, and Red Sandal-wood in the spirit for seven days, then press out and strain; dissolve the Oils in the strained tincture, filter, and add sufficient Rectified Spirit to make 40 oz.

Or Spirit of Lavender, 30; Spirit of Rosemary, 3⅓; Cinnamon, 1; Nutmeg, 1; Red Sanders, 2; Rectified Spirit, to make 128.

Dose.—½ to 2 drms.

Used to colour Liq. Arsenicalis.

(U.S. much stronger and with diluted alcohol; Dan. (Tinct. Lavand. Rubr.) differs considerably from Brit.; not in the others.)

LIMON.

LEMON.

The ripe fruit of *Citrus Limonum*, imported from Southern Europe.

LIMONIS CORTEX.

LEMON PEEL.

The outer part of the rind of the fresh fruit *Citrus Limonum*.

Medicinal Properties.

A warm aromatic. Added to stomachic tinctures and infusions. Particularly applicable to dyspepsia.

Contained in Inf. Aurant. Comp. and Inf. Gentian. Comp.

INCOMPATIBLES.—Mineral Acids and Lime Water.

Preparations.

OLEUM LIMONIS. Pale yellow.

A volatile oil obtained by mechanical means from fresh lemon peel.

Solubility, in all proportions of Glacial Acetic Acid and Absolute Alcohol; 1 in 12 of Rectified Spirit.

Sp. gr. ·85—·86. The samples we have taken were within this range.

Stimulant and carminative. Chiefly used, however, to impart flavour to other medicines. Externally, stimulant and rubefacient.

Its flavour and aroma suffer much from keeping; it keeps the aroma much better if mixed (when fresh) with 10 per cent. (by measure) of Absolute Alcohol.

Dose.—1 to 4 minims.

(Austr. Ger. and Russ. Oleum Citri; Belg. Essentia Citri, sp. g. ·847—·868; Dan. Aetheroleum Cedro; Fr. Huile volatile de Citron; U.S. Oleum Limonis, sp. g. ·850.)

Contained in Lin. Potass. Iod. cum Sapone, and Spiritus Ammoniæ Aromaticus.

SYRUPUS LIMONIS. Light Brown.

Fresh Lemon Peel, 2; Lemon Juice, strained, 20; Refined Sugar, 36. Heat the lemon juice to the boiling point, and having put it into a covered vessel with the lemon peel, let them stand until they are cold, then filter and dissolve the sugar in the filtered liquid with a gentle heat. The product should weigh 56 and measure 41.

Sp. g. 1·340. =(2 Peel and 20 Juice in 41).

Dose.—1 to 2 drms.

(Austr. and U.S. made with Lemon juice; Belg. and Fr. with Citric Acid and Spirit of Lemon; Russ. with Citric Acid and Oleosaccharate of Lemon; not in Dan. or Ger.)

TINCTURA LIMONIS. Pale Brown.

Fresh Lemon Peel, cut small, 1; Proof Spirit, 8: macerate for seven days in a closed vessel with occasional agitation, strain, press, filter, and make up (if necessary) with proof spirit to 8. =(1 in 8).

Dose.—½ to 2 drms.

(Fr. Alcoolature, 1 Recent Peel to 2 of Alcohol and Tincture, 1 Oil in 50; Belg. Spiritus Citri, 1 Oil in 100; not in the others.)

LIMONIS SUCCUS.

LEMON JUICE.

The freshly expressed juice of the ripe fruit of *Citrus Limonum.*

To preserve the juice it may be heated to 150° F., filtered, and set aside in bottles completely filled. If this process be performed during the winter, it is said that the juice may be kept perfectly good for twelve months. Mr. Schweitzer states that if one-tenth part of Alcohol be added to Fresh Lemon Juice, it prevents decomposition, and the juice is rendered fit for exportation.

Sp. g. 1·035—1·045.

Quantity of Citric Acid in a fluid ounce is 36 to 46 grs.

The neutralizing quantities for effervescing mixtures are given under Acidum Citricum, p. 13.

(U.S. 7 per cent. Citric Acid, ·5 per cent. ash.)

Medicinal Properties.

Refrigerant; when diluted, a refreshing beverage in scurvy and in febrile and inflammatory affections.

In acute Rheumatism, ½ to 1 pint daily. Combined with Opium and Cinchona. A local application in pruritus scroti and uterine hemorrhage.

Dose.—½ to 2 oz.

Contained in Syrupus Limonis.

Preparation.

ACIDUM CITRICUM. *See* ACIDUM CITRICUM.

LINIMENTA.

LINIMENTS.

This group has received some valuable additions in the British Pharmacopœia. The Pharmacopœia Committee, in order to guard against mistakes, have called *strong Tinctures* that are employed for external use by the name of *Liniments*, so that all the Tinctures may now be considered for *internal* use.

The following are the Liniments of the British Pharmacopœia, the formulas of which will be found under the names of the substances from which they are prepared :—

		Proportion of the active ingredient to the whole.
LINIMENTUM ACONITI		1 in 1½.
LINIMENTUM AMMONIÆ	Solution of Ammonia.	1 in 4.
LINIMENTUM BELLADONNÆ		1 in 1½.
LINIMENTUM CALCIS	Solution of Lime.	1 in 2.
LINIMENTUM CAMPHORÆ		1 in 5.
LINIMENTUM CAMPHORÆ COMP.	Strong Ammonia.	1 in 4½.
LINIMENTUM CHLOROFORMI		1 in 2.
LINIMENTUM CROTONIS		1 in 8.
LINIMENTUM HYDRARGYRI	Mercury	1 in 6.
LINIMENTUM IODI	Iodine about	1 in 9.
LINIMENTUM OPII	Tinct. Opii	1 in 2.
LINIMENTUM POTASSII IODIDI CUM SAPONE	about	1 in 9.
LINIMENTUM SAPONIS.		
LINIMENTUM SINAPIS COMP.	Oil Mustard	1 in 40.
LINIMENTUM TEREBINTHINÆ		1 in 1⅓.
LINIMENTUM TEREBINTHINÆ ACETICUM		1 in 2¼.

LINUM.

FLAX.

The plant *Linum usitatissimum* is almost universally grown, the seeds only being of medicinal value, from which are procured the Meal and the Oil of Linseed.

LINI FARINA.

LINSEED MEAL.

[ALTERED.]

The dried ripe seeds of *Linum usitatissimum* reduced to powder.

Used in the preparation of the cataplasms of the Pharmacopœia, except Cataplasma Fermenti.

Lini Farina of former Pharmacopœias was the cake of Linseed, from which the oil had been pressed, reduced to powder; but B. P. 1885 applies the term to what has been known as "crushed Linseed."

As there is a difference of opinion in the medical profession as to which of these is the best for making a poultice, it is unfortunate that the old term is now applied to something different. Both kinds might have been official under different names.

(Belg. and Fr. should contain 30 per cent. of oil; U.S. 25 per cent of oil.)

Preparation.

CATAPLASMA LINI. [ALTERED.]

Linseed Meal, 4; boiling Water, 10: mix the linseed meal with the water gradually, with constant stirring.

Now made with Linseed Meal (containing the oil) in place of the old Meal (without its oil) and olive oil.

Applied to inflamed and suppurating parts.

(Fr. Belg. and U.S.; not in the others.)

The bruised seeds, if fresh, are preferred to the meal.

LINI SEMINA.

LINSEED.

Syn. FLAX SEED.

The dried ripe seeds of *Linum usitatissimum*.

The envelope or testa abounds in a peculiar gummy matter or mucilage, readily imparted to hot water.

A decoction of Linseed when cold does not become blue on the addition of Solution of Iodine.

(In all the Pharmacopœias.)

Medicinal Properties.

Demulcent and emollient. Employed in catarrh, dysentery, nephritic and calculous complaints, and inflammatory affections of the mucous membranes and urinary passages.

Preparations.

INFUSUM LINI. [ALTERED.]

Linseed, 150 grs.; dried Liquorice Root, in No. 20 powder, 60 grs.; boiling Distilled Water, 10 oz.: infuse two hours, and strain.

=(about 1 in 30).

The quantity of Linseed is reduced from 160 to 150 grs., and dried Liquorice Root ordered in the place of the fresh.

(Fr. Linseed 1, boiling Water 100; not in the others.)

INCOMPATIBLES.—Preparations of Lead and Iron, and most metallic salts.

OLEUM LINI. A light brownish-yellow.

The Oil expressed in Britain from Linseed without heat.

Sp. g. about ·935; does not congeal above —0·4° F. (—18° C.)

Solubility, of a freshly expressed sample, 1 in 40 of Absolute Alcohol; 1 in 1¼ of Ether.

(Belg. sp. g. ·930; Dan.; Fr.; Ger. sp. g. ·936—·940; Russ. ·930—·940; U.S. sp. g. ·936; not in Austr.)

A useful emollient to burns or scalds, either alone or mixed with Lime Water.

As an enema a pint of Linseed Oil thrown up removes impacted fæces with less pain and spasm than gruel or other aqueous enema.

Linseed Oil, when issuing from the seed whilst pressing, has scarcely any of the odour or taste of the Linseed Oil of the shops, but is acquired in a very short time by exposure to the air. For medicinal purposes it should be procured as fresh as possible.

LIQUORES.

SOLUTIONS.

The following are the Solutions of the British Pharmacopœia, the formulas of which will be found under the names of the substances from which they are prepared:—

	Proportions of active ingredient to the whole.
LIQUOR ACIDI CHROMICI.	1 in 3½
LIQUOR AMMONIÆ.	⅓ the strength of Liq. Amm. Fort.

	Proportions of active ingredient to the whole.
LIQUOR AMMONIÆ FORTIOR.	
LIQUOR AMMONII ACETATIS.	
LIQUOR AMMONII ACETATIS FORTIOR.	
LIQUOR AMMONII CITRATIS.	
LIQUOR AMMONII CITRATIS FORTIOR.	
LIQUOR ANTIMONII CHLORIDI.	
LIQUOR ARSENICALIS	1 in 100.
LIQUOR ARSENICI HYDROCHLORICUS	1 in 100.
LIQUOR ARSENII ET HYDRARGYRI IODIDI	1 in 100.
LIQUOR ATROPINÆ SULPHATIS	1 in 100.
LIQUOR BISMUTHI ET AMMON. CITRAT.	
LIQUOR CALCII CHLORIDI	about 1 in 5½.
LIQUOR CALCIS	1 gr. in 2 oz.
LIQUOR CALCIS CHLORINATÆ.	1 in 10.
LIQUOR CALCIS SACCHARATUS	about 1 in 62.
LIQUOR CHLORI. Solution of Chlorine.	
LIQUOR EPISPASTICUS. Blistering Liquid.	
LIQUOR FERRI ACETATIS.	
LIQUOR FERRI ACETATIS FORTIOR	
LIQUOR FERRI DIALYSATUS.	
LIQUOR FERRI PERCHLORIDI.	1 in 4.
LIQUOR FERRI PERCHLORIDI FORTIOR.	
LIQUOR FERRI PERNITRATIS.	
LIQUOR FERRI PERSULPHATIS.	
LIQUOR GUTTA PERCHA.	
LIQUOR HYDRARGYRI NITRATIS ACIDUS.	
LIQUOR HYDRARGYRI PERCHLORIDI	1 in 875.
LIQUOR IODI . . . . Iodine.	1 in 20.
LIQUOR LITHIÆ EFFERVESCENS	5 grs. in 10 oz.
LIQUOR MAGNESII CARBONATIS	1 in 50.
LIQUOR MAGNESII CITRATIS.	
LIQUOR MORPHINÆ ACETATIS	1 in 100.
LIQUOR MORPHINÆ BIMECONATIS	1¼ in 100.
LIQUOR MORPHINÆ HYDROCHLORATIS	1 in 100.
LIQUOR PLUMBI SUBACETATIS.	
LIQUOR PLUMBI SUBACETATIS DILUTUS.	
LIQUOR POTASSÆ . . . Hydrate of Potash.	1 in 17.
LIQUOR POTASSÆ EFFERVESCENS.	
LIQUOR POTASSII PERMANGANATIS	1 in 100.
LIQUOR SODÆ . . . Hydrate of Soda.	about 1 in 25.
LIQUOR SODÆ EFFERVESCENS. Bicarbonate	30 grs. in 20 oz.
LIQUOR SODÆ CHLORINATÆ.	
LIQUOR SODII ARSENIATIS	1 in 100.
LIQUOR SODII ETHYLATIS	19 in 100.
LIQUOR STRYCHNINÆ HYDROCHLORATIS	1 in 100.
LIQUOR ZINCI CHLORIDI.	

Liquors not official will be found in the Index.

Not Official.

LITHIUM.

LITHIUM.

L, eq. 7.

A silver-white, brilliant, ductile metal, having the density of 0·59, being therefore the lightest metal known.

Its oxide was introduced into medicinal use by Dr. Garrod. It was discovered in 1817, by Arfvedson. It is obtained from several minerals,—Petalite, Lepidolite, Triphane, and formerly Triphylline.

The Carbonate and Citrate are the official preparations.

Not Official.

LITHII BENZOAS.

BENZOATE OF LITHIUM.

$L\ C_7H_5O_2$, eq. 128.

A white powder or small shining scales, with a faintly acid reaction.

Solubility, 1 in 2½ of Water; 1 in 15 of Rectified Spirit.

(Russ. and U.S.; not in the others.)

Medicinal Properties.

A remedy for gout.

Dose.—15 to 30 grs.

LITHII CARBONAS.

CARBONATE OF LITHIUM.

L_2CO_3, eq. 74.

In white powder or in minute crystalline grains.

Solubility: 1 in 100 of cold Water. Insoluble in Alcohol.

Tests.—It dissolves in Hydrochloric Acid; this solution, evaporated to dryness, imparts to the flame of a spirit lamp a red colour. 10 grains of the Salt neutralized with Sulphuric Acid, and afterwards heated to redness, leave 14·86 grains of dry Sulphate of Lithium, which, when redissolved in Distilled Water, yield no precipitate with Oxalate of Ammonium or Solution of Lime—indicating absence of Lime, Magnesia, and Alumina.

Medicinal Properties.

Lithium, combined with Carbonic Acid, given in a diluted solution, as in Lithia Water, acts as a powerful diuretic, probably more so than the corresponding Salts of Potassium or Sodium. In certain states of the system in which Urate of Sodium is liable to be deposited in the tissues, leading to the production of gouty inflammation, the administration of Lithium Salts is attended with advantage, probably by aiding elimination, and likewise by assisting the solution of the urate in the animal fluids. Urate of Lithium is very soluble; Lithium salts are therefore most useful when Uric Acid abounds in the urine.

Dose.—3 to 6 grs. in 3 or 4 oz. of aërated water.

(Belg. Fr. Ger. Russ. and U.S.; not in Austr. or Dan.)

LIQUOR LITHIÆ EFFERVESCENS. Colourless.

10 oz. contain 5 grs. Carbonate of Lithium.

Dose.—5 to 10 oz.

LITHII CITRAS.

CITRATE OF LITHIUM.

$L_3C_6H_5O_7, 4H_2O$, eq. 282.

A white crystalline salt, made by dissolving 50 grains of Carbonate of Lithium in 1 oz. of Water with 90 grains of Citric Acid, then concentrating for crystals to form.

The B. P. 1885 now describes it properly, but has not ordered sufficient Citric Acid.

Solubility: 1 in 2 of Water, without leaving any residue; almost insoluble in Rectified Spirit.

Tests.—Heated to redness it blackens, evolving inflammable gases; and the residue neutralized by Hydrochloric Acid yields with Rectified Spirit a solution which burns with a crimson flame. 20 grains of the Salt dried at 212° F. (100° C.) lose about 3·8 grains, at 240° F. (115·5° C.) an additional 1·3 grain, and burned at a low red heat, with free access of air, leave 7·8 grains of a white residue (Carbonate of Lithium).

Medicinal Properties.

Similar to those of the Carbonate.

Dose.—5 to 10 grs. largely diluted.

(Fr. and U.S.; not in the others.)

Not Official.

LITHII GUAIACAS.

Is prepared by digesting pure Guaiacum Resin in an aqueous solution of Lithia, decanting the clear solution, evaporating and scaling it.

Composed of Lithia, 1; Guaiacum Resin, 3.

This salt, introduced by Dr. Garrod, is given for chronic gout and some forms of rheumatism.

Dose.—5 grs. twice a day.

The Author is indebted to Mr. Sandford for this information.

Not Official.

LITHII SALICYLAS.

A deliquescent white powder with a faintly acid reaction.

Solubility: 4 in 3 of Water; 1 in 2 of Rectified Spirit.

Tests.—Its aqueous solution should be colourless, and not effervesce on the addition of an acid (absence of Carbonate). When agitated with 15 parts of concentrated Sulphuric Acid, the salt should not impart any colour to the acid in fifteen minutes (absence of foreign organic matters).

(U.S.; not in the others.)

Medicinal Properties.

A remedy for gout and rheumatism.

Dose.—20 to 40 grs.

LOBELIA.

LOBELIA.

The herb *Lobelia inflata* in flower, dried; imported from North America.

Medicinal Properties.

In small doses it is diaphoretic and expectorant. More freely used, it is cathartic and emetic; but as an emetic it is too distressing as well as too hazardous for general use, as it has a powerful effect on the respiration, and may cause death. It is chiefly used in spasmodic asthma, also in catarrh and other laryngeal and pectoral affections, severe croup, and chronic bronchitis. In some cases a useful adjunct to diuretics.

(Austr. Belg. Fr. Ger. and U.S.; not in the others.)

ANTIDOTES.—In case of poisoning by Lobelia, the most active stimulants, internal as well as external, should be employed. Tannic Acid or Gallic Acid or strong tea frequently repeated, warmth to the surface, recumbent position important.

Preparations.

TINCTURA LOBELIÆ. Dark greenish-brown.

Lobelia, in No. 40 powder, 1; Proof Spirit, 8: macerate forty-eight hours with 6 of the spirit, agitating occasionally, pack in a percolator, and let it drain, pour on the remaining spirit, and when it ceases to drop, press the marc, filter, and add proof spirit to make 8.

=(1 in 8).

Dose.—(Pharm. Brit.) 10 to 30 minims; but 1 drm. may be given for dyspnœa; 4 drms. as an emetic.

(Austr. 1 and 5; Belg. Fr. and U.S. 1 in 5; Dan. Ger. and Russ. 1 and 10; all by weight.)

TINCTURA LOBELIÆ ÆTHEREA. Intense brownish-green.

Lobelia, in coarse powder, 1; Spirit of Ether, 8: macerate seven days, press, filter, and add sufficient Spirit of Ether to make 8.

=(1 in 8).

Dose.—10 to 30 minims as an antispasmodic.

(Belg. 1 in 5 by weight; not in the others.)

LUPULINUM.

LUPULIN.

[NEW.]

A glandular brownish-yellow resinous powder, obtained from the dried strobiles of *Humulus Lupulus.*

Now included in B. P.; was a Not Official in Companion 1867.

Test.—Not more than 30 or 40 per cent. should be insoluble in Ether. On incineration it should not leave more than 15 per cent. of ash. (*Brit. Pharm.*) Should not leave more than 8 per cent. of ash. (*U.S.P.*)

The ash was determined of eight samples, and gave 28·2, 33·8, 29·9, 27·9, 20·6, 12·1, 18·7, 25·4 per cent.

(Austr. Belg. Dan. Fr. Ger. Russ. and U.S.)

Dose.—2 to 5 grs.

Not Official.

EXTRACTUM LUPULINÆ.—Exhaust Lupulin with Rectified Spirit, and evaporate the strained liquor to a proper consistence. The extract produced is just half the original weight of the Lupulin employed.

Dose.—3 to 6 grs.

OLEORESINA LUPULINI (U.S.).—Exhaust Lupulin with Stronger Ether; distil and evaporate the Ether on a water bath.

Dose.—2 to 5 grs.

TINCTURA LUPULINÆ.—Lupulin, 1; Rectified Spirit, *q. s.*; pack the Lupulin in a percolator and gradually pour the Spirit upon it until 8 of tincture are obtained.

Dose.—½ to 2 drms.

LUPULUS.

HOP.

The dried strobiles of *Humulus Lupulus*, from plants cultivated in England.

Medicinal Properties.

Tonic, stomachic, and moderately narcotic. Used in diseases of local debility with morbid vigilance and other nervous derangement, producing sleep where opiates are objectionable. Hops may be used topically as fomentation or poultice, as a resolvent or discutient in painful swellings and tumours. Very freshly dried Hops are made into a pillow, to procure sleep.

(Austr. Belg. Fr. (Houblon) and U.S.; not in Dan. Ger. or Russ.)

INCOMPATIBLES.—Mineral acids, metallic salts.

Preparations.

EXTRACTUM LUPULI. Greenish-brown.

Hop, 8; Rectified Spirit, 15; Distilled Water, 80: macerate the hop in the spirit for seven days, press out the tincture, filter, and distil off the spirit, leaving a soft extract; boil the residual hop with the water for one hour, then press out the liquor, strain, and evaporate by a water bath to the consistence of a soft extract; mix the two extracts, and evaporate, at a temperature not exceeding 140° F. (60° C.), to a pilular consistence.

1 lb. Hop. yields 4 oz. Extract.

Dose.—5 to 10 grains.

(Belg. Fr. and Russ. have alcoholic Extracts, but not made the same way as Brit.; U.S. has a fluid Extract from Lupulin; not in the others.)

INFUSUM LUPULI. [MODIFIED.]

Hop, 1; boiling Distilled Water, 20: infuse one hour, and strain. =(1 in 20).

The time is reduced from two hours to one hour.

Dose.—1 to 2 oz.

(Fr. 1 in 100; not in the others.)

TINCTURA LUPULI. Deep red.

Hop, 1; Proof Spirit, 8: macerate forty-eight hours in 6 of the spirit, agitating occasionally, pack in a percolator, let it drain, add to it the remaining spirit, and when the fluid ceases to drop, press, filter, and add proof spirit to make 8. =(1 in 8).

Dose.—½ to 2 drms.

(Belg. and U.S. 1 in 5; not in the others.)

Not Official.

MAGNESIUM.

MAGNESIUM.

Mg, eq. 24.

Magnesium, the metallic base of Magnesian Salts, does not exist native. It may be obtained artificially. When set on fire it produces a powerful actinic light, and is used by photographers on this account.

It is a brilliant grey metal, sp. g. 1·750, slightly resembling Silver, malleable, fusible at a low temperature, and convertible into Magnesia by the combined action of air and moisture.

Sulphate of Magnesium was first artificially obtained in England by Dr. Crew in 1675, by evaporation from the water of Epsom spring (whence the name of Epsom Salts). The chief source of the Magnesia now sold is Magnesian Limestone, Double Carbonate of Magnesium and Calcium, called Dolomite, and is obtained by a process discovered by Dr. Henry, of Manchester. Magnesia was first chemically distinguished from Lime by Dr. Black, in 1755, who also showed the difference between Magnesia and its carbonate. From the mode of procuring it, it is frequently termed Calcined Magnesia.

There are two kinds of Magnesia admitted into the Pharmacopœia, the heavy and the light. The former is that which is commonly used in pharmacy, it being smoother, more readily miscible with water, and more compact. It is probably from these causes that it is preferred in medicine, and in the Pharmacopœia it is clearly meant to be used, unless the light is expressly ordered.

The forms in which Magnesia is used are:—Magnesia Levis, Magnesia Ponderosa, Magnesii Carbonas Levis, Magnesii Carbonas Ponderosa, and Magnesii Sulphas.

Note.—Soapstone or Talc Steatite, commonly called French Chalk, is a Silicate of Magnesium and Aluminium, and consists of Silica, 45; Magnesia, 24·75; Alumina, 9·25; Potash, 0·75; Oxide of Iron, 1; Water, 18. (Klaproth.)

MAGNESIA LEVIS.

LIGHT MAGNESIA.

MgO, eq. 40.

Light Carbonate of Magnesium, heated in a Cornish crucible until all the Carbonic Acid is driven off, and it ceases to effervesce when added to warm diluted Sulphuric Acid.

A bulky white powder, differing from Magnesia (heavy Magnesia) only in its great levity, the volumes corresponding to the same weight being in the ratio of 3½ to 1.

It does not mix so readily with water, nor does it make so smooth a draught as the heavy.

Test.—Does not effervesce with Acids.

Dose.—10 to 20 grs. as an antacid; 20 to 60 grs. as a purgative.

(In all the Pharmacopœias.)

Contained in Pulvis Rhei Comp.

MAGNESIA PONDEROSA.

HEAVY MAGNESIA.

MgO, eq. 40.

Heavy Carbonate of Magnesium, heated in a Cornish crucible until all the Carbonic Acid is driven off, and it ceases to cause effervescence with warm diluted Sulphuric Acid.

It is a white powder, scarcely soluble in water, but readily dissolved by Acids without effervescence. Its solution in Hydrochloric Acid, when neutralized by a mixed solution of Ammonia and Chloride of Ammonium, gives a copious crystalline precipitate when Phosphate of Sodium is added to it.

Solubility: 1 in 5,412 of cold Water, 1 in 36,000 of hot Water; like Lime, it is more soluble in cold than in hot water.

Tests.—Dissolved in Nitric Acid and neutralized with a mixture of Ammonia and Chloride of Ammonium, it does not give any precipitate with Oxalate of Ammonium or Chloride of Barium—indicating absence of Lime and Sulphates.

Medicinal Properties.

Antacid, alterative, laxative, and antilithic. Much used in dyspepsia, heart-burn, sick headache, gout, and other complaints attended with acidity, and constipation. As a laxative, it may often be used with advantage when other medicines occasion nausea; generally combined with other purgatives. It is an excellent and mild purgative for children.

It frequently becomes aggregated into a solid mass when prescribed in mixtures, especially when prescribed with the sulphate.

Dose.—10 to 20 grs. as an antacid and alterative, 20 to 60 grs. as a purgative.

(Dan. Oxydum Magnesicum ponderosum; Fr. U.S.; not in the others.)

Although the heavy powder is preferred by many for its smoothness, the light powder is found to be quicker in its action.

INCOMPATIBLES.—All acids.

MAGNESII CARBONAS LEVIS.

LIGHT CARBONATE OF MAGNESIUM.

$(MgCO_3)_3$ $Mg(HO)_2$, $4H_2O$, eq. 382.

A very light powder, precipitated cold from a diluted Solution of Sulphate of Magnesium by Carbonate of Sodium, the precipitate being washed in boiling water until the washings do not precipitate with Chloride of Barium, is then dried at 212° F. (100° C.). When examined under the microscope, it is found to be partly amorphous, with numerous slender prisms intermixed. In other respects it is similar to Magnesii Carbonas Ponderosa.

Solubility: 1 in 2,493 of cold Water, 1 in 9,000 of hot Water.

Dose.—10 to 20 grs. as an antacid; 30 to 60 grs. as a purgative.

(In all the Pharmacopœias.)

MAGNESII CARBONAS PONDEROSA.

HEAVY CARBONATE OF MAGNESIUM.

$(MgCO_3)_3$, $Mg(HO)_2$, $4H_2O$, eq. 382.

A white powder, precipitated from a boiling concentrated solution of Sulphate of Magnesium by a solution of Carbonate of Sodium, the whole evaporated to dryness, and the dry residue digested in water and collected on a filter and washed, so that the Sulphate of Sodium is entirely washed out; it is then dried at 212° F. (100° C.).

Tests.—With excess of Hydrochloric Acid it forms a clear solution, in which Chloride of Barium causes no precipitate—indicating absence of Sulphuric Acid. Another portion of the solution, supersaturated with Ammonia, when filtered, gives no immediate precipitate with Oxalic Acid—indicating absence of Lime. 50 grains calcined at a red heat are reduced to 22.

Dose.—10 to 20 grs. as an antacid; 30 to 60 grs. as a purgative.

(Dan. and Russ. Magnesia Carbonica; not in the others.)

Preparations.

LIQUOR MAGNESII CARBONATIS. *Syn.* FLUID MAGNESIA. [ALTERED.]

Is prepared by impregnating water with Carbonic Acid under pressure in which freshly precipitated Carbonate of Magnesium is suspended.

Each fluid ounce contains 10 grains of Carbonate of Magnesium.

The strength has now been reduced from 13 to 10 grs. in 1 oz.

Tests.—It is clear and free from any bitter taste. 1 fl. oz. evaporated to dryness gives a residue which after being calcined weighs 4 grs.

Dose.—1 to 2 oz.

Not Official.

MISTURA ALBA.—Carbonate of Magnesia, 10 grs.; Sulphate of Magnesia, 1 drm.; Peppermint Water, to 1 oz.—*King's College Hospital.*

MISTURA MAGNESIÆ C. RHEO.—Rhubarb, 7½ grs.; Carbonate of Magnesia, 15 grs.; Peppermint Water, 1 oz.—*St. Thomas's Hospital.*

MAGNESII CITRATIS LIQUOR.

SOLUTION OF CITRATE OF MAGNESIUM.

Carbonate of Magnesium, 100 grs.; Citric Acid, 200 grs.; Syrup of Lemons, ½ oz.; Bicarbonate of Potassium, in crystals, 40 grs.; Water, a sufficiency.

Dissolve the Citric Acid in two ounces of the water, and having added the Carbonate of Magnesium, stir until it is dissolved. Filter the solution into a strong half-pint bottle, add the Syrup and sufficient water to nearly fill the bottle, then introduce the Bicarbonate of Potassium, and immediately close the bottle with a cork, which should be secured with string or wire; afterwards shake the bottle until the Bicarbonate of Potassium is dissolved.

Dose.—5 to 10 oz.

(The U.S. formula modified. Fr. Limonade Purgative; not in the others).

MAGNESII SULPHAS.

SULPHATE OF MAGNESIUM. EPSOM SALT.

$MgSO_4 . 7H_2O$, eq. 246.

In minute, colourless, transparent, rhombic prisms, possessing a bitter taste.

Soluble, 10 in 13 of Water, measures 18; 20 in 3 of boiling Water.

Tests.—The aqueous solution gives copious white precipitates with Chloride of Barium (Sulphate), and with a mixed solution of Ammonia, Chloride of Ammonium and Phosphate of Sodium (Ammonio-Magnesian Phosphate); at ordinary temperatures it is not precipitated by Oxalate of Ammonium—indicating absence of Lime, nor does it give a brown precipitate with Chlorinated Lime or Soda—indicating absence of Iron. The precipitate given by Carbonate of Sodium, when obtained from a boiling solution of 100 grains of the salt, should, when well washed, dried, and heated to redness, weigh 16·26 grains.

(In all the Pharmacopœias; Dan. Sulphas Magnesicus.)

Contained in Mistura Sennæ Comp. 1 in 5.

Medicinal Properties.

A mild and safe cathartic, operating with little pain or nausea Used in colic and obstinate constipation, and in most cases where a cathartic is required which shall not cause debility or relaxation of the stomach.

Stimulates the intestinal glands, but not the liver.—Dr. Rutherford.

Dose.—1 to 4 drms.

INCOMPATIBLES.—Alkaline Carbonates, Lime Water, Acetate of Lead, Nitrate of Silver.

Sulphate of Magnesium should not be prescribed with Tartarated Soda, for although the solutions of these two salts are transparent when first mixed, yet after some time Tartrate of Magnesium will precipitate. The following prescription will illustrate this:—

℞ Sodæ Tartaratæ, ʒj; Magnes. Sulph., ʒij; Aquæ ad ℥iss.

Preparations.

ENEMA MAGNESII SULPHATIS.

Sulphate of Magnesium, 1 oz.; Olive Oil, 1 oz.; Mucilage of Starch, 15 oz.: dissolve the Sulphate of Magnesium in the Mucilage, then add the Oil, and mix.

For one enema.

(Not in the other Pharmacopœias.)

Not Official.

LIQUOR MAGNESIÆ SULPHATIS (Dr. Henry, of Dublin).—Saturated solution of Sulphate of Magnesium, 7 (equal to 4 of crystals); Diluted Sulphuric Acid, 1: mix.

MISTURA MAGNESII SULPHATIS C. RHEO INFANTIUM.—Sulphate of Magnesia, 1 drm.; Tincture of Rhubarb, 2 drms.; Syrup of Ginger, 1 drm.; Caraway Water to 1½ oz.—*Dose*, 1 to 2 drms.—*King's College Hospital.*

MAGNESII SULPHIS.—Russ. Magnesia Sulphurosa.—*Dose*, 20 to 30 grains.

MANGANESII OXIDUM NIGRUM.

BLACK OXIDE OF MANGANESE.

MnO_2, eq. 87.

Used for producing Chlorine and Permanganate of Potassium.

(In all the Pharmacopœias except Ger.)

Not Official.

MANGANESII OXIDUM PRÆPARATUM.

Digest finely powdered commercial black oxide in diluted Hydrochloric Acid for twenty-four hours, frequently shaking the bottle containing them; then pour off the acid; wash the oxide thoroughly with water, pouring off the lighter portions each time for use, and rejecting the heavier and coarser particles; finally dry in a water bath.

An admirable remedy for gastrodynia, pyrosis, etc.

Dose.—10 to 30 grs.

Not Official.

MANGANESII SULPHAS.

Colourless or pale rose-coloured, right rhombic prisms.

Soluble, 7 in 10 of Water; insoluble in Rectified Spirit.

(Fr. Ger. and U.S.; not in the others.)

Medicinal Properties.

A useful purgative in gouty affections: is, however, little used, being uncertain in its action, and apt to cause vomiting; its taste is disagreeably styptic.

Dose.—1 to 5 grs. as a tonic; 30 to 60 grs. as a purgative.

Does not excite the liver, but is a powerful stimulant to the intestines.—Dr. Rutherford.

Manganese has been associated with Iron in pharmaceutical preparations, *e.g.* Syrupus Ferri Phosph. c. Manganesio.

MANNA.

MANNA.

A concrete saccharine exudation, obtained by incision from the stem of *Fraxinus Ornus* which is cultivated for the purpose chiefly in Calabria and Sicily.

The larger and better kinds are called Flake Manna, and consist principally (60 to 80 per cent.) of Mannite, $C_6H_6(HO)_6$, eq. 180; together with common Sugar and extractive matter.

Solubility of Mannite in Water, 1 in 5; in Rectified Spirit, 1 in 150.

Medicinal Properties.

Nutritious, particularly when recent. A mild laxative; does not excite inflammation; useful for children and delicate females.

Dose.—As a laxative, 60 grs. to 1 oz.

(In all the Pharmacopœias.)

A convenient way of having Manna in a state ready for dispensing is previously to dissolve a quantity in water, strain, and evaporate to the original weight of the Manna acted upon. It keeps good for a long time.

Not Official.

MARANTA.

ARROW-ROOT.

The Starch obtained from the roots of *Maranta arundinacea*, a native of the tropical parts of America and the West Indies.

That which comes from Bermuda is considered the best.

A light white powder, or small pulverulent masses.

Test.—Free from unpleasant odour and taste.

Medicinal Properties.

Nutrient and demulcent, frequently taken with milk. It should be first made into a thin paste with cold milk, and boiling milk added to make a thick mucilage.

(Austr. Belg. Dan. Fr. and Russ.; not in Ger. or U.S.)

MARMOR ALBUM.

WHITE MARBLE.

$CaCO_3$, eq. 100.

Used in producing Carbonic Acid Gas.

MASTICHE.

MASTICH.

A concrete resinous exudation obtained by incisions in the bark of the stem and large branches of *Pistacia Lentiscus*, produced in the island of Scio.

Small irregular yellowish tears, brittle and transparent.

Insoluble in Water; partly soluble in Rectified Spirit and Oil of Turpentine; 2 in 1 of Ether; 2 in 1 of Chloroform.

Sp. g. 1·06—1·07.

Medicinal Properties.

Stimulant. Chiefly prescribed in pills to divide active medicines, and especially with mercurials when the pills are to be silvered, to prevent the silver being acted on by the mercury.

Dose.—In powder, 20 to 40 grs.

(In all the Pharmacopœias except Ger.; Dan. Resina Mastix.)

Not Official.

Cotton, saturated in a solution of 2 parts of Mastic with 1 of Ether, is a good stopping for decayed teeth.

Mastic Dentaire (Fr.).—Ether Rectifié, adding Mastic to saturation.

MATICÆ FOLIA.

MATICO LEAVES.

The dried leaves of *Piper Angustifolium*, imported from Peru.

Medicinal Properties.

An agreeable aromatic tonic and stimulant, influencing the urinary passages. Locally (in substance) as a styptic, on the supposition that its action is mechanical. Its styptic properties, however, may depend on the Terebinthinate Oil it contains.

Dose.—Of the powder, 30 to 120 grs. three times daily.

(Belg. Fr. Russ. and U.S.; not in the others.)

Preparations.

INFUSUM MATICÆ.

Matico leaves, cut small, 1; boiling Distilled Water, 20: infuse half an hour, and strain.

Dose.—1 to 4 oz.

(Not in the other Pharmacopœias.)

Not Official.

Tinctura.—Matico leaves, in coarse powder, 1; Proof Spirit, 5: macerate fourteen days, strain, express, and filter. =(1 in 5).

Astringent. Useful in catarrh of the bladder of the aged.

Dose.—1 to 2 drms.

(Fr. and Russ. 1 and 5; U.S. 1 in 10; not in the others.)

MEL.

HONEY.

A saccharine secretion deposited in the honeycomb by *Apis Mellifica*, the Hive Bee.

Tests.—Boiled with Water for five minutes, and allowed to cool, it does not become blue with the Solution of Iodine—indicating absence of Flour. After incineration it should not yield more than ·2 per cent. of ash, the solution of which in water acidulated with Nitric Acid should not give more than a slight turbidity with solution of Chloride of Barium (trace of Sulphate.)

(In all the Pharmacopœias.)

Medicinal Properties.

Demulcent and laxative, but apt to gripe and occasion flatulency when given in efficient doses; this is more particularly the case with old honey. It is more generally used as a vehicle for other medicines. A useful addition to gargles—with sage, for instance. An external application to foul ulcers. Equal parts honey and flour, an excellent poultice for boils.

Preparations.

MEL BORACIS. 1 in 8 nearly. *See* BORAX.

MEL DEPURATUM. CLARIFIED HONEY. Light yellowish-brown.

Melt in a water bath, and strain while hot through flannel previously moistened with warm water.

(In all the Pharmacopœias except Fr.)

OXYMEL. Brown.

Clarified Honey, 8; Acetic Acid, 1; Distilled Water, 1: liquefy the honey by heat, and mix with it the other two.

A pleasant addition to Gargles. Sometimes used as a vehicle to expectorant medicines, and to flavour fever drinks.

Dose.—1 to 2 drms.

(Austr. Honey, 2, Common Vinegar 1; Fr. Honey 4, White Vinegar 1; Russ. Honey 15, Acetic Acid (25 per cent.) 1; not in Belg. Dan. Ger. or U.S.)

MENTHÆ PIPERITÆ OLEUM.

OIL OF PEPPERMINT.

The Oil distilled in Britain from fresh flowering Peppermint, *Mentha Piperita.*

A very pale yellow.

Sp. g. (several samples taken) ·900—·907.

Soluble in all proportions of Absolute Alcohol; 2 in 1 (*or less*) of Rectified Spirit, becomes milky on adding more Spirit.

Medicinal Properties.

A grateful aromatic, stimulant, and carminative. Allays nausea, relieves spasmodic pains in the stomach. Useful in the flatulent colic of children. Covers the taste of nauseous medicines, such as Rhubarb, and mitigates the griping effect of purgatives. Externally applied, relieves facial neuralgia.

The fresh herb, bruised, and applied to the epigastrium, often allays sickness, and is useful in cholera infantium.

Dose.—1 to 4 minims on sugar, or in emulsion.

(In all the Pharmacopœias.)

Preparations.

AQUA MENTHÆ PIPERITÆ.

Oil of Peppermint, 1½ drms.; Water, 1½ galls.: distil 1 gall. =(Oil 1 in 853).

Dose.—1 to 2 oz.

(Russ. ½ the strength; U.S. stronger; Austr. Belg. Dan. Fr. and Ger. distilled from the leaves.)

ESSENTIA MENTHÆ PIPERITÆ. Straw colour.

Oil of Peppermint, 1; Rectified Spirit, 4: mix. =(1 in 5).

Dose.—10 to 20 minims.

SPIRITUS MENTHÆ PIPERITÆ. Colourless.

Oil of Peppermint, 1; Rectified Spirit, 49: dissolve. =(1 in 50).

(Belg. (Spiritus Menthæ) Oil 1, Spirit 99; Fr. (Teinture d' Essence de Menthe), Oil 2, Alcohol 98; Ger. 1 in 10; U.S. from the leaves and oil, about 1 in 10; Austr. from leaves; not in the others.)

Dose.—30 to 60 minims, or for children under 5 years, 1 to 3 minims.

NOTE.—An agreeable syrup is made by adding 60 minims of the spirit to 1 oz. of Syrup.

MENTHÆ VIRIDIS OLEUM.

OIL OF SPEARMINT.

The Oil distilled in Britain from fresh flowering Spearmint, *Mentha viridis.*

Soluble in all proportions of Absolute Alcohol; 1 in 1 (*or less*) of Rectified Spirit, becomes milky on adding more Spirit.

Medicinal Properties.

Similar to those of Oleum Menthæ Piperitæ.

Dose.—1 to 4 minims on sugar in emulsion, or made into pills with powder of Gentian.

(Austr. Belg. Dan. Russ. and U.S.; not in Fr. or Ger.)

Preparation.

AQUA MENTHÆ VIRIDIS.

Oil of Spearmint, 1½ drms.; Water, 1½ galls.: distil 1 gall.
=(Oil 1 in 853).

Dose.—1 to 2 oz.

(U.S. stronger; Belg. and Russ. much weaker; Dan. and Ger. from leaves; not in the others.)

MENTHOL.

$C_{10}H_{20}O$, eq. 156.

[NEW.]

A Stearoptene obtained by cooling the Oil distilled from the fresh herb of *Mentha Arvensis vars. piperascens et glabrata,* and of *Mentha Piperitæ.*

Colourless acicular crystals or fused crystalline masses. Its melting point should not exceed 110° F. (43°·3 C.), the hardest masses do not melt below 180° F. (42°·2 C.). It should be entirely dissipated by the heat of a water bath.

Now included in B. P.; was a Not Official in Companion 1880.

Almost insoluble in Water and Glycerine; soluble 5 in 1 of Rectified Spirit; 4 in 1 (nearly) of Chloroform; 8 in 3 of Ether; 10 in 7 of Benzin; 1 in 4 of Olive Oil.

Medicinal Properties.

Useful in some forms of neuralgia and headache, also in rheumatism.

MEZEREI CORTEX.

MEZEREON BARK.

The dried bark of *Daphne Mezereum,* Mezereon; or *Daphne Laureola,* Spurge Laurel.

Medicinal Properties.

A stimulant, acting on the kidneys. Rarely used alone. With Sarsaparilla it is employed as a sudorific and alterative in venereal, rheumatic, scrofulous, and chronic cutaneous diseases. Applied to the skin, it produces inflammation and vesication, though slow in action.

The bark soaked in hot vinegar-and-water is applied with a compress to produce a blister: ointment of the bark is used to keep issues or blisters open.

Contained in Decoctum Sarsæ Compositum.

(In all the Pharmacopœias except Austr. and Ger.; Fr. Mézéréon ou bois gentil.)

Preparations.

EXTRACTUM MEZEREI ÆTHEREUM. Intense green.

Mezereon Bark, cut small, 4; Rectified Spirit, 40; Ether, 5: macerate the Mezereon in three quarters of the spirit for three days with frequent agitation, strain and press. To the residue of the Mezereon, add the remainder of the Spirit, and again macerate for three days, with frequent agitation, strain and press, mix and filter the strained liquors; recover the greater part of the Spirit by distillation, evaporate what remains to the consistence of a soft extract, put this into a stoppered bottle with the Ether, and macerate for twenty-four hours, shaking them frequently, decant the ethereal solution, recover part of the Ether by distillation, and evaporate what remains to the consistence of a soft extract.

Used in preparing Linimentum Sinapis Compositum; 8 grs. are contained in 1 oz.

(Belg. Ext. Mezerei; Fr. Extrait Éthéré de Garou (from the *Daphne Gnidium*), Dan. Ger. and Russ. with Spirit only; U.S. fluid Extract with Alcohol 1 in 1; not in Austr.)

Not Official.

Unguentum Mezerei.

Belg. Ext. Mezerei, 39; Lard, 865; Yellow Wax, 96; Alcohol (92°), 90.
Fr. Ext. Mezerei Æther, 4; Lard, 90; White Wax, 10; Alcohol, 9.
Russ. Ext. Mezerei, 1; Washed Lard, 9.
U.S. Fluid Extract of Mezereon, 25; Lard, 80; Yellow Wax, 12.

MICA PANIS.

SOFT CRUMB OF BREAD.

Contained in Cataplasma Carbonis.

Not Official.

CATAPLASMA MICÆ PANIS.—Grated Crumb of Bread and boiling water *q.s.*

MISTURÆ.

MIXTURES.

The following are the mixtures of the British Pharmacopœia:—

Dose.		Proportions.
½ to 1 oz.	MISTURA AMMONIACI	about 13 grs. in 1 oz.
1 to 2 oz.	MISTURA AMYGDALÆ.	
1 to 2 oz.	MISTURA CREASOTI	about 1 minim in 1 oz.
1 to 2 oz.	MISTURA CRETÆ	about 13 grs. in 1 oz.
1 to 2 oz.	MISTURA FERRI AROMATICA.	

		Proportions.
1 to 2 oz.	MISTURA FERRI COMPOSITA	2½ grs. in 1 oz.
½ to 2 oz.	MISTURA GUAIACI	about 11 grs. in 1 oz.
½ to 2 oz. for a child	MISTURA SCAMMONII	3 grs. in 1 oz.
1 to 1½ oz.	MISTURA SENNÆ COMPOSITA	1 oz. Magn. Sulph. in 5 oz.
1 to 2 oz.	MISTURA SPIRITUS VINI GALLICI	about 1 Brandy in 2½.

MORI SUCCUS.

MULBERRY JUICE.

The deep purple juice of the ripe fruit of *Morus nigra*.

Sp. g. about 1·060.

Medicinal Properties.

Refreshing and laxative; serves to prepare a grateful drink well adapted to febrile cases.

(Fr. Suc de Mûre.)

Preparation.

SYRUPUS MORI. Deep lake colour.

Mulberry Juice, 20; Refined Sugar, 36; Rectified Spirit, 2½: heat the juice to the boiling-point, and when it has cooled filter it; dissolve the Sugar in the filtered liquid by a gentle heat, and add the spirit; the product should weigh 54. Sp. g. 1·330.

Dose.—1 to 2 drms.

(Austr. Belg. Dan. and Fr. (Sirop de Mûres); not in the others.)

An agreeable addition to a gargle for sore throat. Used as a colouring matter for draughts, 1 drm. to 1 oz.

MORPHINÆ ACETAS.

ACETATE OF MORPHINE.

$C_{17}H_{19}NO_3$, $HC_2H_3O_2$, $3H_2O$, eq. 383.

The formula has been altered as suggested.—*Ph. Jl.* Jan. 1881, p. 620.

A white powder. Part of its Acetic Acid is sometimes driven off in drying.

Almost entirely soluble in 2½ parts of Water at common temperatures.—*Brit. Pharm.*

Although we have tested a very large number of commercial samples, we have never found one so soluble.

Soluble, 1 in 100 of Rectified Spirit; 1 in 5 of Glycerine.

Tests.—20 grains of the Salt forms with 1 drachm of Water a slightly turbid solution, which is rendered clear by the addition of 1 grain of Acetic Acid; and this solution, when mixed with Ammonia in slight excess, yields a precipitate which, after washing with a little cold water and drying in a water bath, weighs 15 grains. If the Salt yield a larger proportion than this, it should be recrystallized from hot Water acidulated with Acetic Acid. When Sulphuric Acid is added to the Salt, acetous vapours are evolved. Its aqueous solution yields a white precipitate with Solution of Potash, soluble in excess. Ignited with free access of air it leaves no residue.

(Belg. Dan. Russ. and U.S.; not in Austr. Fr. or Ger.)

Medicinal Properties.

The same as those of Opium. This salt being much more soluble in Water than the Hydrochlorate is used for hypodermic injection. But by keeping it loses some Acetic Acid and becomes partly insoluble.

Dose.—⅛ to ½ a grain.

Preparations.

INJECTIO MORPHINÆ HYPODERMICA. [ALTERED.]

A solution of Acetate of Morphine containing one grain of the Acetate in ten minims of the injection.

Hydrochlorate of Morphine, 92 grs.; Solution of Ammonia, Acetic Acid and Distilled Water, of each a sufficiency.

Dissolve the Hydrochlorate of Morphine in two ounces of distilled water, aiding the solution by a gentle heat; then add Solution of Ammonia so as to precipitate the Morphine, and render the liquid slightly alkaline; allow it to cool; collect the precipitate on a filter, wash it with distilled water, and allow it to drain; then transfer the Morphine to a small porcelain dish with about an ounce of distilled water, apply a gentle heat, and carefully add Acetic Acid until the Morphine is dissolved, and a very slightly acid solution is formed. Add now sufficient distilled water to make the solution measure exactly two fluid ounces. Filter and preserve the product in a stoppered bottle excluded from the light.

Tests.—It should be a clear solution free from any solid particles, very slightly acid to test-paper. A fluid drachm of it, rendered slightly alkaline by the addition of Solution of Ammonia, yields a precipitate of Morphine which, after being washed and dried, should weigh 4·25 grains, corresponding to 6 grains of Acetate of Morphine.

Note.—This solution is practically the same strength as before; 1 fluid drachm now yields 4·25 grains, and formerly it yielded 4·3 grains. The solution is now stated to contain 1 grain in 10 minims, and formerly 1 grain in 12 minims, but this apparent difference is chiefly owing to the alteration in the chemical formula of the Salt.

Dose.—By subcutaneous injection 1 to 5 mins.

LIQUOR MORPHINÆ ACETATIS. Colourless. [ALTERED.]

Acetate of Morphine, 9 grs.; Diluted Acetic Acid, 18 minims; Rectified Spirit, ½ oz.; Distilled Water, 1½ oz.: dissolve the Acetate in the mixed liquids. =(1 in 100).

1 grain is now contained in 107 minims, formerly 1 in 123 minims

Note.—The Acetate of Morphine should be recently prepared and of such quality that 20 grains should form a clear solution with 1 fluid drachm of Water by the help of not more than 1 grain of Acetic Acid.

Dose.—10 to 60 minims.

Not Official.

Solution of Acetate of Morphine for Hypodermic injection, which has been long used, and is double the strength of the Pharmacopœia.

1 grain of the Acetate of Morphia in every 6 minims of the solution, which should be neutral.

Dose.—1 to 3 minims for each injection.

Sulphate of Atropine combined with it, increases its calming effect, whilst it lessens its constipating effect.

Acetate of Morphine, 10 grs.; Sulphate of Atropine, ¼ gr.; Water, 60 minims dissolve.

½ a grain of Acetate of Morphine and $\frac{1}{80}$th of a grain of Sulphate of Atropine in every 3 mins.

Dose.—1 to 3 minims for each injection.

MORPHINÆ BIMECONATIS LIQUOR.

SOLUTION OF BIMECONATE OF MORPHINE.

[NEW.]

This is a title by which a certain preparation has been known to the medical profession for nearly fifty years. The object of that preparation being a purified Solution of Opium containing the Salt of Morphine in its natural combination. That the preparation now introduced into the Pharmacopœia differs from the old one is readily discovered by a comparison of the two.

The British Pharmacopœia gives the following formula:—

Dissolve Hydrochlorate of Morphine 9 grains in 2 or 3 drachms of Distilled Water, aiding solution by warmth; then add Solution of Ammonia until Morphine ceases to be precipitated, cool, filter; wash the precipitate with Distilled Water until the washings cease to give a precipitate with Nitrate of Silver; drain; mix the precipitate with sufficient water to produce 1½ oz.; add Rectified Spirit ½ oz. and Meconic Acid 6 grains: dissolve.

A colourless or nearly colourless liquid, of which 1 fl. oz. contains about 5½ grains of Bimeconate of Morphine.

Dose.—5 to 40 minims.

Not Official.

LIQUOR MORPHIÆ BIMECONATIS (SQUIRE).

Introduced into medicine by the Author in 1839.

It is a purified Solution of Opium, of a light brown colour, standardised to contain 1 per cent. of Morphine.

MORPHINÆ HYDROCHLORAS.

HYDROCHLORATE OF MORPHINE.

Syn. MURIATE OF MORPHIA.

$C_{17}H_{19}NO_3 . HCl. 3H_2O$, eq. 375·5.

A white powder, or in thin prisms of a silky lustre.

Solubility: 1 in 24 of Water, 1 in 90 of Rectified Spirit; 1 in 8 of Glycerine; insoluble in Ether.

Tests.—Its aqueous solution gives a white curdy precipitate with Nitrate of Silver (Chloride), and a white one with Potash (Morphine), which is redissolved when an excess of the alkali is added. Entirely destructible by heat, leaving no residue. 20 grains of the Salt, dissolved in half an ounce of warm water, with Ammonia added in the slightest possible excess, give, on cooling, a crystalline precipitate, which, when washed with a little cold water and dried in a water bath, weighs 16 grains—pure Morphine.

As pure Morphine is insoluble in Water, it is rarely used in medicine; the Salts only are used.

The following are reckoned on the B. P. standard of Opium containing 10 p. c. of Morphine:—

1 gr. Hydrochl. Morph. = 9⅓ grs. Opium = 8 grs. Powd. Opium = 4⅔ grs. Ext. Opium = 117 minims Tinct. Opium.

(In all the Pharmacopœias except Dan.; Fr. Chlorhydrate de Morphine.)

Medicinal Properties.

Hydrochlorate of Morphine possesses the anodyne and soporific powers of Opium, yet it acts more agreeably, being less likely to produce headache and nausea. It is also less exciting and stimulating than Opium.

Has no appreciable effect on the secretion of bile, and does not prevent the stimulating effect of such a substance as the Salicylate of Soda.—Dr. Rutherford.

Dose.—⅛ to ½ gr.

INCOMPATIBLES.—Alkalies and Alkaline Earths, astringent vegetable Infusions and Decoctions.

ANTIDOTES.—$\frac{1}{32}$ gr. Strychnine acts as an antidote to ½ gr. of Morphine.—*Lancet*, Dec. 9, 1871.

Preparations.

LIQUOR MORPHINÆ HYDROCHLORATIS. Colourless. [ALTERED.]

Hydrochlorate of Morphine, 9 grs.; Diluted Hydrochloric Acid, 18 minims; Rectified Spirit, ½ oz.; Distilled Water, 1½ oz.: dissolve. =(about 1 in 100).

Now contains about 1 grain in 109 minims, formerly 1 in 123 minims.

(Not in the other Pharmacopœias.)

Dose.—10 to 60 minims.

A Solution for Hypodermic injection cannot be made (cold) stronger than 1 in 24. If a stronger solution is used, it must be injected whilst warm; the solution of the Acetate therefore is more convenient.

SUPPOSITORIA MORPHINÆ. Cream Colour. [MODIFIED.]

Hydrochlorate of Morphine, 6 grs.; Oil of Theobroma, 174 grs.: rub the Hydrochlorate of Morphine with 24 grs. of the Oil of Theobroma in a slightly warmed mortar, and add this to the remainder of the Oil of Theobroma previously melted at a low temperature; mix the whole thoroughly, and pour the mixture while it is fluid into suitable moulds of the capacity of 15 grs.

The Benzoated Lard and White Wax are now omitted.

Each suppository contains ½ grain of Hydrochlorate of Morphine.

(Not in the other Pharmacopœias.)

SUPPOSITORIA MORPHINÆ CUM SAPONE. [MODIFIED.]

Hydrochlorate of Morphine, 6 grs.: Glycerine of Starch, 30 grs.; Curd Soap, in powder, 100 grs.; Starch, in powder, a sufficiency.

Mix the Hydrochlorate of Morphine with the Glycerine of Starch and Soap, and add sufficient starch to form a paste of suitable consistence. Divide the mass into twelve equal parts, each of which is to be made into a conical or other convenient form for a suppository.

Less Glycerine of Starch is now used.

Each suppository contains ½ grain of Hydrochlorate of Morphine.

TINCTURA CHLOROFORMI ET MORPHINÆ.

The formula is given under Chloroform.

TROCHISCI MORPHINÆ. White.

Lozenges made with Hydrochlorate of Morphine, Tincture of Tolu, Sugar, and Gum Acacia.

Each lozenge contains $\frac{1}{36}$ gr. of Hydrochlorate of Morphine.

Dose.—One or two occasionally for cough.

TROCHISCI MORPHINÆ ET IPECACUANHÆ. Cream colour.

Lozenges prepared with Hydrocholorate of Morphine, Ipecacuanha, Tincture of Tolu, Sugar, and Gum Acacia.

Each lozenge contains $\frac{1}{36}$ gr. of Hydrochlorate of Morphine, and $\frac{1}{12}$ gr. of Ipecacuanha.

(U.S. contains $\frac{1}{40}$ gr. of Sulphate of Morphine, and $\frac{2}{25}$ gr. of Ipecacuanha in each.)

Dose.—One or two occasionally for cough.

Not Official.

MORPHINÆ OLEAS.

Oleate of Morphine consists of 1 gr. of pure Morphine dissolved in 60 grs. of Oleic Acid.

MORPHINÆ SULPHAS.

SULPHATE OF MORPHINE.

$(C_{17}H_{19}NO_3)_2, H_2SO_4, 5H_2O$, eq. 758.

[NEW.]

Colourless acicular crystals.

Solubility, 1 in 20 of water, sparingly in Rectified Spirit.

Tests.—Its aqueous solution gives a white precipitate (Morphine) with Solution of Potash, soluble in excess; and with Chloride of Barium a white precipitate (Sulphate), insoluble in hot Hydrochloric Acid.

(Belg. Fr. Ger. and U.S.; not in Austr. Dan. or Russ.)

Now included in B.P.; was a Not Official in Companion 1882.

Not Official.

MORPHINÆ TARTRAS.

A white powder.

Solubility 1 in 10 of Water; sparingly in Rectified Spirit.

MORRHUÆ OLEUM.

COD-LIVER OIL.

The Oil extracted from the fresh liver of the Cod *Gadus morrhua* by a steam-heat or water bath not exceeding 180° F. (82·2° C.). Slightly yellow.

Soluble, sparingly in Absolute Alcohol; 1 in 2 of Ether; 1 in 3½ to 4 of Acetic Ether.

Sp. g. from 0·915 to 0.929.

Test.—A drop of Sulphuric Acid added to a few drops of the Oil on a porcelain slab develops a violet colour, which soon passes to a yellowish or brownish red.

(Austr. Belg. Dan. Ger. and Russ. Ol. Jecoris Aselli; Fr. Huile de Foie de Morue; U.S. Oleum Morrhuæ.)

A solvent of pure Quinine. 1 oz. at 140° F. will dissolve 4 grains readily.

Medicinal Properties.

Demulcent and nutrient. Most efficient in scrofulous diseases, glandular swellings, diseases of the joints, tabes mesenterica, rickets, and chronic rheumatism: and generally in all chronic cases of impaired digestion, assimilation, and nutrition. In pulmonary consumption it deservedly possesses a high reputation: sometimes given in emulsion with Malt Extract.

Dose.—Brit. Ph. dose, 1 to 8 drms. 1 to 4 drms., on Orange Juice, water, or a mixture of Tincture of Orange with Nitric Acid and Syrup.

2 drms. rubbed with 30 grs. of Powdered Acacia and 1½ drms. of Distilled Water till an emulsion is formed, and then gradually add, with constant trituration, 1 oz. of Peppermint Water, forms a nice emulsion.

The oil is sometimes given in flexible capsules.

Cod-Liver Oil has engaged much attention amongst Pharmaceutists. The Year-books of Pharmacy are full of suggestions how to render it palatable; one author finishes up with a triumph, that the particles of Oil struggle in vain for re-union.

The following formula makes a good Emulsion:—

Powder of Tragacanth	27 grs.
Rubbed into a paste by first adding	
Syrup	¼ oz.
And then Water	1½ oz.
Rub these into a good mucilage, and add by a thin stream	
Cod-Liver Oil	2½ oz.
These being well incorporated, add gradually	
Distilled Water	2½ oz.
And lastly Essence of Lemon	12 minims.
Essential Oil of Almonds	1 minim.

Previously dissolved in ¾ oz. of Rectified Spirit.

The excellency of the Emulsion is in proportion to the diligence of the operator in using his pestle and mortar.

Pancreatized Cod-Liver Oil is prescribed under the impression that it is more easily digested than Cod-Liver Oil alone.

MOSCHUS.

MUSK.

The inspissated and dried secretion from the preputial follicles of *Moschus moschiferus*, a native of the mountainous regions of Central Asia; imported from China and India.

In grains or lumps concreted together, soft and unctuous to the touch, of a reddish-brown colour, having a strong and peculiar odour; contained in an oval sac or membrane about two inches in diameter.

It should be free from earthy impurities.

(In all the Pharmacopœias except Austr.; Fr. Musc.)

Medicinal Properties.

Stimulant and antispasmodic, increasing the vigour of the circulation without materially affecting the cerebral functions. It may be given in almost all spasmodic diseases, particularly in cases of great prostration with intense nervous excitement.

Dose.—5 to 10 grs. in pill or mixture.

Not Official.

Mistura.—Musk, 3; Acacia, 3; Sugar, 3; Rose Water, 160; triturate the Musk with the Sugar, then with the Acacia; add the Rose Water gradually.

Dose.—1 to 2 oz.

TINCTURA.—Musk, 60 grs.; Rectified Spirit 10 oz.: digest seven days, and strain.
Belg. and Fr.—Musk, 1; Alcohol (80°), 10.
Dan. Ger. and Russ.—Musk, 1; Diluted Spirit, 25; Water, 25.
U.S.—Musk, 1; Water, 45; Alcohol, 45; Diluted Alcohol to make 100. All by weight.

MUCILAGINES.

MUCILAGES.

Mucilages are employed more as vehicles than as remedies. Mucilage of Acacia is sometimes given to relieve irritating cough, but more generally to render Oils and solutions of Resins miscible with Water; *see* ACACIA. M. Amyli, for Enemas; M. Tragacanthæ, for Lozenges, and also for suspending heavy powders in mixtures, in preference to M. Acaciæ.

The Mucilages are:—

MUCILAGO ACACIÆ.
MUCILAGO AMYLI.
MUCILAGO TRAGACANTHÆ.

MYRISTICA.

NUTMEG.

The dried seed of *Myristica fragrans,* divested of its hard coat or shell.

It is cultivated in the Banda Islands of the Malayan Archipelago, imported from Sumatra and the Molucca Islands.

Medicinal Properties.

Aromatic, stimulant, and carminative. Chiefly used to cover the taste of Rhubarb and other medicines.

Dose.—5 to 15 grs.

(Austr. Belg. Nux Moschata; Fr. Muscadier cultivé; Dan. Ger. and Russ. Semen Myristicæ; U.S. Myristica.)

Contained in Pulvis Catechu Compositus, Pulvis Cretæ Aromaticus, Spiritus Armoraciæ Compositus, Tinctura Lavandulæ Composita.

Preparations.

OLEUM MYRISTICÆ. Colourless. Very fragrant.

The oil distilled in Britain from Nutmeg. This injunction of the British Pharmacopœia is necessary, the foreign oil being very much inferior to that distilled in Britain.

Sp. g. We find that the samples have varied ·880—·896 and ·912—·923.

Soluble in all proportions of Absolute Alcohol; 1 in 4½ of Rectified Spirit; sparingly in Proof Spirit.

Dose.—1 to 4 minims on Sugar, or in emulsion.

(U.S.; Austr. Ger. and Russ. Oleum Macidis; Belg. Oleum Macidis Æthereum; Dan. Ætheroleum Macidis; not in Fr.)

Contained in Sp. Ammon. Aromat. and Pilula Aloes Socotrinæ.

OLEUM MYRISTICÆ EXPRESSUM. EXPRESSED OIL OF NUTMEGS. *Syn.* OIL OF MACE.

A concrete oil, of a firm consistence and orange colour, obtained from Nutmeg by expression and heat.

(Austr. Ol. Nucis Moschatæ; Fr. Beurre de Muscade; Belg. and Ger. Ol. Nucistæ; Russ. Ol. Myristicæ Expressum; not in Dan. or U.S.)

Contained in Emplastrum Calefaciens and Emplastrum Picis.

SPIRITUS MYRISTICÆ. Colourless.

Volatile Oil of Nutmeg, 1; Rectified Spirit, 49: dissolve. =(1 in 50).

Dose.—30 to 60 minims.

(U.S. 3 in 100; not in the others.)

MYRRHA.

MYRRH.

A gum-resinous exudation from the stem of *Balsamodendron Myrrha*, collected in Arabia Felix and Abyssinia.

In irregular-shaped masses, of a reddish-yellow or reddish-brown colour.

Solubility: partially in Water, more soluble in Alcohol and Ether.

(In all the Pharmacopœias.)

Medicinal Properties.

A stimulant tonic. Useful in humid asthma and chronic catarrh; also in chlorosis and defective menstruation. Externally to aphthous sore mouths and diseased gums.

Dose.—10 to 30 grs.

Contained in Decoctum Aloes Compositum, Mistura Ferri Composita, Pilula Aloes et Myrrhæ, Pilula Asafœtidæ Composita, Pilula Rhei Composita.

Preparations.

TINCTURA MYRRHÆ. Light reddish-brown.

Myrrh, in coarse powder, 1; Rectified Spirit, 8: macerate forty-eight hours with 6 of the spirit, agitating occasionally, pack in a percolator, and when it ceases to drop pour on the remaining spirit, press the marc, filter, and add Rectified Spirit to make 8. =(1 in 8).

Dose.—½ to 1 drm. More frequently mixed with water to form a gargle.

(Austr. Dan. Fr. Ger. and Russ. 1 and 5; Belg. and U.S 1 in 5; all by weight.)

Not Official.

Gargarisma Myrrhæ.—Tincture of Myrrh, 1; Honey, 1; Infusion of Roses, 18: mix.

Tincture of Myrrh and Borax.—*See* Borax.

Not Official.

NAPHTHALENE.

$C_{10}H_8$, eq. 128.

Purified Naphthalene occurs in white micaceous scales, with a tarry odour.

Insoluble in Water; soluble 1 in 25 of Rectified Spirit; 1 in 1½ of Chloroform; 1 in 3 of Ether; 1 in 7½ of Oil of Turpentine; 1 in 8 of Olive Oil; slightly soluble in Glycerine.

Medicinal Properties.

Insecticide. Employed with success in scabies as a 10 or 20 per cent. solution in oil, but has no influence on the secondary eruptions. In other skin diseases, especially those in which large surfaces are exposed, it is to be avoided.—*Lancet*, Nov., 1882, p. 909.

In catarrhal conditions of the intestines, also in vesical catarrh. *Adult dose*, 8 to 10 grs. daily.—*Amer. Journ. Pharm.*, 1884, p. 645.

Not Official.

NAPHTHOL.

BETA-NAPHTHOL.

$C_{10}H_7,HO$, eq. 144.

Small white crystalline scales, almost free from odour.

Nearly insoluble in Water; soluble 1 in 2 of Rectified Spirit; 3 in 4 of Ether; 1 in 24 of Chloroform; 1 in 12 of Olive Oil; 1 in 40 of Glycerine.

Medicinal Properties.

A powerful disinfectant. It is very effective in parasitic diseases and in chronic eczema.—*Med. Times and Gaz.*, Oct., 1882, p. 505.

Preparations.

For Scabies.—β. Naphthol, 15; Pulv. Cretæ Alb., 10; Sapo virid., 50; Lard, 100.

For Pediculi.—β. Naphthol, 5; Olive Oil, 50.

For Pityriasis versicolor.—β. Naphthol, 2; Spir. Lavand., 10; Sapo virid., 100.

NECTANDRÆ CORTEX.

BEBEERU BARK.

The bark of *Nectandra Rodiæi*, Greenheart Tree, imported from British Guiana.

The bark is intensely bitter, and contains an alkaloid, Beberine ($C_{18}H_{21}NO_3$), which is identical with Buxine, the alkaloid of *Buxus sempervirens*, and Pelosine, obtained from *Cissampelos Pareira*.

Sulphate of Beberine of Brit. Pharm. is a mixed substance.

Medicinal Properties.

Tonic and antiperiodic. Used in remittent and intermittent fevers, though not to be relied on as a substitute for Cinchona.

Preparation.

BEBERINÆ SULPHAS. *See* BEBERINÆ SULPHAS.

Not Official.

NICKEL.

Sulphate of Nickel.—Greenish-blue crystals.

Given in Chlorosis.

Dose.—½ to 1 gr. two or three times a day; is best given on a full stomach, as on an empty one it is apt to produce nausea.

Not Official.

NITRO-GLYCERINE.

A solution in Spirit (1 in 100) one minim for a dose on sugar or in a little water every three hours, has been given with success in severe cases of angina pectoris (Ringer).

The dose can be increased to 5 and even 8 Minims.—*Brit. Med. Journal*, April 10, 1880, p. 556.

Official Preparation.

TABELLÆ NITROGLYCERINI. [NEW.]

Tablets of Chocolate, each weighing 2½ grs. and containing $\frac{1}{100}$ gr. of pure Nitro-glycerine.

Dose.—1 or 2 tablets.

NUX VOMICA.

NUX VOMICA.

The seeds of *Strychnos Nux-vomica*, imported from the East Indies.

Medicinal Properties.

In very small doses, tonic, and laxative by stimulating the muscular coat of the bowel. In larger doses it operates on the whole system through the spinal motor nerves, indicated by involuntary muscular contractions. Useful in palsy and all paralytic affections, and in cases of feeble contractile powers. It is recommended in chorea and atonic dropsy, and in debilitated conditions of the alimentary canal, also in hay fever. The Extract and Tincture are the preparations generally prescribed.

Dose.—Of the powder, 1 to 3 grs.

(In all the Pharmacopœias; Fr. Noix Vomique; Ger. Semen Strychni.)

ANTIDOTES.—Emetic of Sulphate of Zinc, Mustard, or Ipecacuanha, or hypodermic injection of Apomorphia; Animal Charcoal; Bromide of Potassium or Chloral; Nitrite of Amyl inhalations; Chloroform or Ether to relax the muscles; hypodermic injection of Curare. (Murrell on Poisons.)

Preparations.

STRYCHNINA. *See* STRYCHNINA.

EXTRACTUM NUCIS VOMICÆ. Light brown. [MODIFIED.]

Nux Vomica, 16; Rectified Spirit, 64; Distilled Water, 16. Heat the previously split Seeds to a temperature of 212° F. (100° C.) for three hours, and then reduce to a fine powder. Mix the Spirit with the Water, and make the powdered Nux Vomica into a paste with 20 of the mixture. Allow this to macerate for twelve hours, then transfer to a percolator, and add another 20 of the mixture. When this has percolated, pour on the remainder of the Diluted Spirit in successive portions; press the marc, filter the expressed liquor, and add it to the percolated liquid.

Take of this liquid 1 fl. oz., and estimate the amount of total alkaloid in the following way:—Evaporate almost to dryness over a water bath, dissolve the residue in 2 fl. drms. of Chloroform and half a fl. oz. of Diluted Sulphuric Acid, with an equal bulk of Water; agitate and warm gently. When the liquors have separated, draw off the Chloroform, and add to the acid liquor excess of Solution of Ammonia and half a fl. oz. of Chloroform; well agitate, gently warm, and, after the liquors have completely separated, transfer the Chloroform to a weighed dish, evaporate over a water bath, and dry for one hour, at 212° F. (100° C.). Allow the residue of total alkaloid to cool, and then weigh.

Take of the percolated liquid as much as contains 131¼ grains of total alkaloid, distil off the spirit, and evaporate over a water bath until the extract weighs 2 oz. This extract will contain 15 per cent. of total alkaloid.

Different strength spirit now used, and the extract is standardised.

Test.—10 grains of the extract when treated in the following manner should yield 1½ grain of total alkaloid. Dissolve the extract in half a fl. oz. of Water, heating gently if necessary, and add a drm. of Carbonate of Sodium previously dissolved in half a fl. oz. of Water, and half a fl. oz. of Chloroform; agitate, warm gently, and separate the Chloroform. Add to this half a fl. oz. of Diluted Sulphuric Acid with an equal bulk of Water; again agitate, warm, and separate the acid liquor from the Chloroform. To this acid liquor add now an excess of Ammonia, and agitate with half a fl. oz. of Chloroform; when the liquors have separated, transfer the Chloroform to a weighed dish, and evaporate the Chloroform over a water bath. Dry the residue for one hour, and weigh.

Dose.—¼ to 1 gr. Often with Aloes and Ipecacuanha.

(Austr. Belg. Fr. and U.S. with Spirit; U.S. also Fluid Extract; Russ. has spirituous extract reduced to powder, and aqueous extract, also reduced to powder—they are named Extractum Strychni Spirituosum and Aquosum respectively; Dan. and Ger. made with proof spirit and reduced to powder.)

TINCTURA NUCIS VOMICÆ. Straw colour. [MODIFIED.]

Extract of Nux Vomica, 133 grs.; Distilled Water, 4 oz.; Rectified Spirit, a sufficiency: mix sufficient of the spirit with the water to produce 20 oz., and dissolve the extract in the mixture.

1 fl. oz. of this tincture will contain 1 gr. of the alkaloids of Nux Vomica.

Dose.—10 to 20 minims.

(Austr. and Fr. (Teinture de Noix Vomique), 1 and 5; Belg. and U.S. 1 in 5; Dan. 1 and 10; Ger. Tinct. Strychni, 1 and 10; Russ. Tinct. Strychni, 1 and 5 (also Tinct. Strychni Etherea 1 and 10 of Spirit of Ether); all by weight.)

Not Official.

ST. IGNATIUS'S BEAN.—The seeds of the *Ignatia amara*, from the Philippine Islands. They contain the same constituents as Nux Vomica, and afford about 1·2 per cent. of Strychnine.

An Alcoholic EXTRACT is made of this in the same manner as that of Nux Vomica.

Chiefly used in cases of debility of the digestive organs, and in all instances where Nux Vomica is employed.

Dose.—⅓ to 1 gr. in pill three times a day.

OLEA.

OILS.

The Oils ordered in the Pharmacopœia consist of expressed and distilled oils: viz. the expressed are those of the Almond and the Olive, which are chiefly used for ointments and liniments; Castor Oil, used in Collodion Flexile, Linimentum Sinapis Compositum, and Pilula Hydrargyri Subchloridi; Croton Oil is used for Linimentum Crotonis; Linseed Oil, not used for preparations; we have also the expressed oil from the Lemon-rind, and that of the Theobroma; also the expressed oil of Nutmegs, which is used in Emplastrum Calefaciens and Emplastrum Picis. All the other oils are obtained by distillation.

The following are the Oils of the British Pharmacopœia, and will be found under the names of the substances from which they are derived:—

100 parts of the material, according to Messrs. Herring, yield on an average—

OLEUM AMYGDALÆ. Expressed from the seed	42
OLEUM ANETHI. Distilled from the fruit	2·8 to 3
OLEUM ANISI. Distilled from the fruit and imported	2
OLEUM ANTHEMIDIS. Distilled from the flowers	0·75
OLEUM CAJUPUTI. Distilled from the leaves and imported.	
OLEUM CARUI. Distilled from the fruit	5
OLEUM CARYOPHYLLI. Distilled from the flower-bud	16
OLEUM CINNAMOMI. Distilled from the bark.	
OLEUM COPAIBÆ. Distilled from the oleo-resin	35 to 45
OLEUM CORIANDRI. Distilled from the fruit	0·6
OLEUM CROTONIS. Expressed from the seeds	25
OLEUM CUBEBÆ. Distilled from the unripe fruit	11
OLEUM EUCALYPTI. Distilled from the leaves and imported.	
OLEUM JUNIPERI. Distilled from the unripe fruit	0·8
OLEUM LAVANDULÆ. Distilled from the flowers	1·5
OLEUM LIMONIS. Expressed or distilled from the fresh peel.	
OLEUM LINI. Expressed from the seeds without heat.	
OLEUM MENTHÆ PIPERITÆ. Distilled from the fresh herb.	
OLEUM MENTHÆ VIRIDIS. Distilled from the fresh herb.	
OLEUM MORRHUÆ. Extracted from the fresh liver by heat	42
OLEUM MYRISTICÆ. Distilled from the seed kernel	5·5
OLEUM MYRISTICÆ EXPRESSUM. Expressed from the seed with heat	13
OLEUM OLIVÆ. Expressed from the ripe fruit and imported.	
OLEUM PHOSPHORATUM.	
OLEUM PIMENTÆ. Distilled from the unripe berry	4
OLEUM PINI SYLVESTRIS. Distilled from the fresh leaves.	
OLEUM RICINI. Expressed from the seeds and imported.	
OLEUM ROSMARINI. Distilled from the flowering tops	0·5
OLEUM RUTÆ. Distilled from the fresh herb.	
OLEUM SABINÆ. Distilled from fresh Savin.	
OLEUM SANTALI . . . 2 to 4, sometimes	4½
OLEUM SINAPIS. Distilled with water from the seeds of Black Mustard after the expression of the fixed oil.	
OLEUM TEREBINTHINÆ. Distilled from Turpentine and imported.	
OLEUM THEOBROMATIS. Expressed with heat from the seeds of *Theobroma Cacao*	25

Not Official.

OLEUM CALAMI AROMATICI	1
OLEUM CARDAMOMI	3
OLEUM CASCARILLÆ	0·6
OLEUM CUMINI	2·5
OLEUM STAPHISAGRIÆ	16

Not Official.

OLEATES.

These preparations have come into more general use during the last few years. They were originally made by dissolving the oxide of the metal, or the alkaloid, in an excess of Oleic Acid; but more recently Dr. Shoemaker proposed the method of precipitation by double decomposition between a salt of the base and Solution of Castile Soap (Oleate of Sodium with a little Palmitate); Solution of Oleate of Potassium may be used with advantage in place of the Solution of Castile Soap, when the pure Oleate is required. The Oleate can also be purified from Palmitate by solution in Benzin.

OLEATE OF POTASSIUM SOLUTION.—To one gallon of boiling Distilled Water add 5 oz. of Bicarbonate of Potassium, when effervescence has ceased add 14 oz. (by weight) of Oleic Acid, continue boiling gently until reaction is complete, when cold dilute to 2 gallons.

OLEATE OF SODIUM SOLUTION.—Powdered Castile Soap, 1; Distilled Water, 5: dissolve with heat and make up to 20.

OLEATE OF ALUMINIUM.—Potash Alum, 240 grs.; dissolve in Distilled Water, 40 oz.; then add Solution of Oleate of Sodium, 20 oz.: warm, wash by decantation, collect, and dry.

OLEATE OF BISMUTH.—Crystallized Nitrate of Bismuth, 280 grs.; dissolve in cold Glycerine, 4 oz. (by weight); add slowly Solution of Oleate of Sodium, 20 oz.; warm gently, wash by decantation, collect, and dry.

OLEATE OF COPPER.—Sulphate of Copper, 180 grs.; dissolve in Distilled Water, 40 oz.; add Solution of Oleate of Sodium, 20 oz.; warm gently, wash, collect, and dry.

OLEATE OF IRON.—Solution of Tersulphate of Iron, U. S. P., 391 mins. (equivalent to about 210 mins. of Solution of Persulphate of Iron, B. P.); mix with Distilled Water, 40 oz.; add slowly Solution of Oleate of Sodium, 20 oz.; warm gently, wash, collect, and dry.

OLEATE OF LEAD.—Acetate of Lead, 280 grs.; dissolve in Distilled Water, 40 oz.; add slowly Solution of Oleate of Sodium, 20 oz.; warm gently, wash by decantation, collect, and dry.

OLEATE OF MERCURY.—*See* HYDRARGYRI OLEAS.

OLEATE OF SILVER.—Nitrate of Silver, 245 grs.; dissolve in cold Distilled Water, 40 oz.; add slowly Solution of Oleate of Sodium, 20 oz.; wash with cold water, collect, and dry in a dark place.

OLEATE OF ZINC. (*See* also ACIDUM OLEICUM.)—Acetate of Zinc, 180 grs.; dissolve in cold Water, 40 oz.; add slowly Solution of Oleate of Sodium, 20 oz.; wash with cold Water, collect, and dry.

The Oleates of the Alkaloids are prepared by Solution in Oleic Acid, the following are the most important:—

OLEATE OF ACONITINE—8 grs. in 1 oz.
OLEATE OF ATROPINE—8 grs. in 1 oz.
OLEATE OF COCAINE—45 to 90 grs. in 1 oz.
OLEATE OF MORPHINE—8 to 24 grs. in 1 oz.
OLEATE OF MORPHINE AND MERCURY—*See* HYDRARG. OLEAS.
OLEATE OF QUININE—22, 44, and 110 grs. in 1 oz.
OLEATE OF VERATRINE—8 and 24 grs. in 1 oz.

OLIVÆ OLEUM.

OLIVE OIL.

The Oil expressed from the ripe fruit of *Olea Europæa*. Pale yellow or greenish-yellow.

Chiefly obtained from the south of Europe.

Sp. g. about 0·915; congeals partially at about 36° F. (2·2° C.).

Solubility: 1 in 2 of Ether; partially in Rectified Spirit.

(In all the Pharmacopœias.)

Medicinal Properties.

Nutritious and mildly laxative, demulcent in the form of emulsion. Has also been successfully given for ascarides, followed by a purge. Used in laxative enemata. It is most extensively employed in pharmacy, in the preparation of liniments, ointments, and plasters.

Dose.—½ to 1 oz.

Contained in Enema Magnesii Sulphatis, Linimentum Ammoniæ, Linimentum Calcis, Linimentum Camphoræ, some Emplastra and Unguenta.

OPIUM.

OPIUM.

The juice obtained in Asia Minor by incision from the unripe capsules of *Papaver somniferum, Linn.*, inspissated by spontaneous evaporation.

Any ordinary variety of Opium may be employed as a source of alkaloids; but, otherwise used for officially recognised purposes, Opium must be that obtained in Asia Minor, and must be of such a strength that when dried and powdered and the powder heated to 212° F. (100° C.) until it ceases to lose moisture, and the product tested by the appended method, or any trustworthy method, it shall yield as nearly as practicable 10 per cent. of Morphine; that is, 100 parts of such dry powdered Opium shall yield not less than 9·5 parts, and not more than 10·5 parts, of Morphine.

Opium yielding from 11 to 15 per cent. of Morphine is now readily obtained.

Opium is derived almost exclusively from the *Papaver somniferum.* This plant was cultivated by the early Greeks, and is at present grown for its Opium, in India, Persia, Egypt, and Asiatic Turkey. In France and Germany, it is cultivated more for the sake of its seed, and in England for its capsules. The process of wounding the capsules and collecting the opium has continued the same for the last 1800 years.* Smyrna Opium, and also that of Constantinople, are employed in this country. Specimens of Persian Opium in fingers, of Patna in squares, of Benares in balls covered with skin, and Egyptian in flat pieces like that of Constantinople, are to be found in several museums.

MORPHINE.—Discovered by Sertüner. Crystallizes in nearly white, flat, six-sided prisms, alkaline in reaction, soluble in alcohol, *soluble without decomposition in solution of Potash*, *insoluble* in Water or Ether, forming crystallizable salts with acids. It is coloured red by Nitric Acid, and blue by Perchloride of Iron. Intensely bitter.

NARCOTINA.—First noticed by Derosne, in 1803. In thin pearly tables. It is neutral. Insoluble in Water; soluble in Ether, in boiling Alcohol, in diluted acids; *insoluble in solution of Potash.* Forms a yellow solution with Nitric Acid. It has no narcotic properties, and has therefore been called Anarcotina; it has been given in 5-grain doses as a substitute for Quinine.

PAPAVERIN.—Discovered by Dr. Merck. In white crystalline needles. Insoluble in Water; sparingly soluble in Alcohol and Ether. Moistened with strong Sulphuric Acid, it becomes dark blue.

PARAMORPHIA (Thebaica).—Discovered by Pelletier. In white crystalline needles. Soluble in Water, in Alcohol, 1 in 10, and in Ether. Unites with acids. Not reddened by Nitric Acid, nor rendered blue by Persalts of Iron. In doses of 1 grain it produces tetanic spasms.

NARCEIN.—Discovered by Pelletier, in 1832. In white, silky, acicular crystals: neutral, with a slightly bitter taste. Soluble in 375 parts of cold and in 220 of hot Water, also in Alcohol; insoluble in Ether. It forms a bluish colour with Iodine, which is destroyed by heat; but it is not reddened by Nitric Acid. The diluted mineral acids impart to this substance a fine light blue colour, which disappears on the further addition of water. It is supposed to be inert.

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* An interesting account of this process is given by Mr. Maltass, in the *Pharmaceutical Journal*, February, 1855.

MECONIN was discovered by Couerbe. It forms white acicular crystals, is a neutral body, and dissolves in 265 parts of cold and in 18 of boiling Water. Very soluble in Ether, Alcohol, and the essential oils.

MECONIC ACID.—In white, crystalline, pearly scales. Soluble in 4 parts of boiling Water, also in cold Water and Alcohol. Persalts of Iron render it blood-red. The Salts of Lead, Silver, and Barium give white precipitates, which are soluble in Nitric Acid. Therapeutically, Meconic Acid has of itself little or no action on the system, but combined with Morphine, it forms the natural salt of Opium, and has a more calming effect than any of the artificial salts of Morphine.

OPIANINE, or OPIANIC ACID.—Discovered by Dr. Hinterberger. Occurs in long, colourless, prismatic crystals. Insoluble in Water, and sparingly soluble in boiling Alcohol, from which it entirely separates on cooling. Strong Sulphuric Acid dissolves without changing it; Nitric Acid colours it yellow, and if added to its Sulphuric Acid solution, blood-red. It contains no Nitrogen.

CRYPTOPIA.—Discovered by T. and H. Smith, *Pharm. Journ.*, vol. viii. pp. 595, 716. With strong Sulphuric Acid it produces a deep blue colour.

Spurious Opium has from time to time found its way into the market; and some very similar in external appearance to the best Opium has been found on analysis to contain very little Morphine.

British Pharmacopœia gives the following test:—

Test.—Take of Opium, 140 grs.; freshly Slaked Lime, 60 grs.; Chloride of Ammonium, 40 grs.; Rectified Spirit, Ether, and Distilled Water, of each a sufficiency. Triturate together the Opium, Lime, and 400 grain-measures of Distilled Water in a mortar until a uniform mixture results; then add 1000 grain-measures of Distilled Water and stir occasionally during half an hour. Filter the mixture through a plaited filter, about three inches in diameter, into a wide-mouthed bottle or stoppered flask (having the capacity of about 6 fl. oz. and marked at exactly 1040 grain-measures) until the filtrate reaches this mark. To the filtered liquid (representing 100 grs. of Opium) add 110 grain-measures of Rectified Spirit and 500 grain-measures of Ether, and shake the mixture; then add the Chloride of Ammonium, shake well and frequently during half an hour, and set it aside for twelve hours. Counterbalance two small filters; place one within the other in a small funnel, and decant the ethereal layer as completely as practicable upon the inner filter. Add 200 grain-measures of Ether to the contents of the bottle and rotate it; again decant the ethereal layer upon the filter, and afterwards wash the latter with 100 grain-measures of Ether added slowly and in portions. Now let the filter dry in the air, and pour upon it the liquid in the bottle in portions, in such a way as to transfer the greater portion of the crystals to the filter. When the fluid has passed through the filter, wash the bottle and transfer the remaining crystals to the filter, with several small portions of Distilled Water, using not much more than 200 grain-measures in all, and distributing the portions evenly upon the filter. Allow the filter to drain, and dry it, first by pressing between sheets of bibulous paper, and afterwards at a temperature between 131° and 140° F. (55° and 60° C.), and finally at 194° to 212° F. (90° to 100° C.) Weigh the crystals in the inner filter, counterbalancing by the outer filter. The crystals should weigh 10 grs., or not less than 9½ and not more than 10½ grs., corresponding to about 10 per cent. of Morphine in the dry powdered Opium.

The French Pharmacopœia states that Smyrna Opium, dried at 100° C., should contain at least 10 to 12 per cent. of Morphine.

14 of good Smyrna Opium fresh from the chest, when dried, weigh 12, and the extract from it weighs 7.

INCOMPATIBLES.—The Alkaline Carbonates, Lime Water, Salts of Lead, Iron, Copper, Mercury, and Zinc, Liquor Arsenicalis, and all astringent Vegetables.

ANTIDOTES.—In case of poisoning by Opium, the antidotes are an emetic of 10 grs. of Sulphate of Copper, the stomach pump, external stimulants, cold affusion, Ammonia to the nostrils, compelled exertion, and artificial respiration. Belladonna or hypodermic injection of Atropine is also recommended.

Medicinal Properties.

Opium has three main physiological effects :—It diminishes pain (insensibility). It causes sleep. It arrests secretion, excepting that of the skin, which it promotes.

In small doses it excites the vascular and nervous systems, increasing the rapidity and fulness of the pulse; this is followed by sleep, accompanied with perspiration. It is apt to produce nausea, headache, thirst, and constipation. If the dose be large, the sleepiness becomes intense, and there is difficulty in waking the patient. By continued use, it impairs the appetite and digestion. It also acts on the respiratory system, diminishing the frequency of respirations, and thus impairing the oxidation of the blood.

Dose.—Of the powder, ½ to 2 grs. = $\frac{1}{16}$ to ¼ gr. Hydrochlorate of Morphine.

When *small* pills of Opium are desired, 25 grains of powdered Opium with 1 minim of Syrup and 1 minim of water will form a nice pill mass.

(In all the Pharmacopœias.)

Preparations.

CONFECTIO OPII. Very dark olive-brown.

Compound Powder of Opium, 100 grs.; Syrup, 300 grs.: mix. =(1 of Powder of Opium in 40).

Dose.—5 to 20 grains.

Tablets of Confection of Opium are small hard cylinders, about one inch long, and weighing 20 grs. Are recommended to be taken for a "nightcap" in Brandy and Water.

EMPLASTRUM OPII. Brown.

Opium in very fine powder, 1; Resin Plaster, 9: melt the Resin Plaster by the heat of a water bath, add the Opium by degrees, and mix thoroughly. =(1 in 10).

Anodyne, to relieve local pain.

(U.S. Extract, 1 in 16; Belg. 1 in 20; not in the others.)

ENEMA OPII.

Tincture of Opium, ½ drm.; Mucilage of Starch, 2 oz.: mix for one enema.

(Not in the other Pharmacopœias.)

EXTRACTUM OPII. Rich deep brown. [STANDARDISED.]

Opium in thin slices, 16 oz.; Distilled Water, 6 pints (120 oz.): macerate the Opium in 2 pints (40 oz.) of the Water twenty-four hours, and express the liquor. Reduce the residue of the Opium to a uniform pulp, macerate it again in 2 pints (40 oz.) of the Water for twenty-four hours, and express. Repeat the operation a third time. Mix the liquors, strain through flannel, and evaporate by a water bath until the product weighs 8 oz.

B. P. states that it should contain 20 per cent. of Morphine.

This is less stimulating than powdered Opium, and is preferred as a direct sedative.

100 of good Opium yield 50 of extract.

Dose.—½ to 1 gr. or more.

(In all the Pharmacopœias except Dan.)

EXTRACTUM OPII LIQUIDUM. Most intense brown. [STANDARDISED.]

Extract of Opium, 1; Distilled Water, 16; Rectified Spirit, 4; digest the Extract of Opium in the Water for an hour, stirring frequently; then add the Spirit and filter. The product should measure 20. =(1 oz. Ext. in 20 oz.).

Contains 1 grain of Extract in 22 minims.

B. P. states that it should contain about 1 per cent. of Morphine.

Dose.—10 to 40 minims.

(Rather stronger than the Wine, and about one-third stronger than the Tincture.)

Produces the effects of Opium, but with less derangement of the nervous system.

LINIMENTUM OPII. Black. Deposits a good deal when kept.

Tincture of Opium, 1; Liniment of Soap, 1: mix. =(1 in 2).

The addition of the Opium to the Soap Liniment renders it more useful in many cases of rheumatism and local pains.

(Not in the other Pharmacopœias.)

PILULA SAPONIS COMPOSITA. Light brown. [MODIFIED.]

Opium, in fine powder, 1; Hard Soap, in powder, 4; Glycerine, a sufficiency: mix the Soap with the Opium, and add Glycerine sufficient to make a pill mass. =(1 Powder of Opium in 6, nearly).

Glycerine is now used in the place of Water.

Nearly 6 grains contain 1 grain of Powder of Opium.

Anodyne and soporific.

Dose.—3 to 5 grains.

(Belg. Pil. de Cynoglosso, 1 in 10; not in the other Pharmacopœias.)

PULVIS OPII COMPOSITUS. Light olive-brown.

Opium, 3; Black Pepper, 4; Ginger, 10; Caraway, 12; Tragacanth, 1; all in powder: mix. (The dry ingredients for making Confectio Opii.) =(1 of Powder of Opium in 10)

Dose.—2 to 5 grains.

TINCTURA OPII. Dark brown. (Laudanum.) [STANDARDISED.]

Opium, in coarse powder, 1½; Proof Spirit, 20: macerate seven days, strain, express, filter, and add Proof Spirit to make 20. =(1 oz. in 13⅓ oz.).

1 gr. in 14⅔ minims.

B. P. states that it should contain about ·75 per cent. of Morphine; this is rather a low standard for it, 1 per cent. would have been better.

40 minims = 30 minims Ext. Opii Liq., or 33 minims Vin. Opii.

A valuable anodyne and soporific, preferred to solid Opium when a more immediate effect is required.

Dose.—5 to 40 minims.

(Austr. Dan. Ger. Russ. and U.S. 1 in 10; Belg. 1 in 11·9; Fr. with Extract, 1 in 12; all by weight.)

TINCTURA OPII AMMONIATA. Intense reddish-brown. Deposits much when kept.

Opium, in powder, 100 grs.; Saffron, cut small, 180 grs.; Benzoic Acid, 180 grs.; Oil of Anise, 60 minims; Strong Solution of Ammonia, 4 oz.; Rectified Spirit, 16 oz.: macerate seven days in a closed vessel, with occasional agitation, strain, and add sufficient Rectified Spirit to make 20 oz. =(1 Powdered Opium in 96 minims).

Dose.—½ to 1 drm.

The Scotch Paregoric.—The Caustic Ammonia keeps the Morphine of the Opium in solution; Carbonate of Ammonium would precipitate it.

TROCHISCI OPII. Deep brown.

Lozenges made of Extract of Opium, Tincture of Tolu, Sugar, Gum Acacia, and Extract of Liquorice.

Each lozenge contains $\frac{1}{10}$th gr. of Extract of Opium, which, by the B. P. standard should represent $\frac{1}{50}$th gr. of Morphine.

Dose.—1 or 2 lozenges.

(U.S. Opium $\frac{1}{20}$th gr. in each; not in the others.)

VINUM OPII. Deep brown. Deposits a good deal when kept.

Extract of Opium, 1 oz.; Cinnamon Bark, 75 grs.; Cloves, 75 grs.; Sherry Wine, 20 oz.: macerate for seven days, with occasional agitation, and filter. =(about 1 oz. Extract in 20 oz.).

22 minims = 1 gr. Extract.

Each fluid drachm contains about ½ gr. of Morphine.—*Brit. Pharm.*

Dose.—10 to 40 minims.

Vinum Opii Brit. Ph. 1864 is without aromatics, and is therefore preferred by some oculists; the formula is as follows:—

Opium, in powder, 1½; Sherry, 20: macerate seven days, and filter. =(1 powder in 13½).

Dose.—10 to 40 minims.

(Dan. both with and without aromatics, 1 of powder in 10; Fr. and U.S. 1 in 8 with aromatics; Belg. with aromatics, 1 *Extract* in 15, and without, 1 strained Opium in 12; Austr. Ger. and Russ., Tinct. Opii Crocata, 1 in 10; all by weight.)

Other preparations containing Opium.	Proportions of Opium in the mass.
PILULA IPECACUANHÆ CUM SCILLA	1 in 23 nearly
PILULA PLUMBI CUM OPIO	1 in 8.
PILULA SAPONIS COMPOSITA	1 in 6 nearly.
PULVIS CRETÆ AROMATICUS CUM OPIO	1 in 40.
PULVIS IPECACUANHÆ COMPOSITUS	1 in 10.
PULVIS KINO COMPOSITUS	1 in 20.
SUPPOSITORIUM PLUMBI COMPOSITUM	1 gr. in each.
TINCTURA CAMPHORÆ COMPOSITA	¼ gr. in 1 fl. drm.
UNGUENTUM GALLÆ CUM OPIO	1 in 14⅔.

	Proportions of Morphine in the mass.
MORPHINÆ ACETATIS INJECTIO HYPODERMICA	1 in 10.
MORPHINÆ ACETATIS LIQUOR	1 in 100.
MORPHINÆ HYDROCHLORATIS LIQUOR	1 in 100.
SUPPOSITORIUM MORPHINÆ	½ gr. in each.
SUPPOSITORIUM MORPHINÆ C. SAPONE	½ gr. in each.
TROCHISCI MORPHINÆ	$\frac{1}{36}$ gr. in each.
TROCHISCI MORPHINÆ ET IPECAC.	$\frac{1}{36}$ gr. in each.

Not Official.

Aqua Opii.—Dried Opium, 1; Water, 12: distil, 6.

Employed in eye lotions where spirit is objectionable. Aq. Opii, 1: Aq. Sambuci, 7.

Unguentum Opii.—Soft extract of Opium, 1; Simple Ointment, 9: mix. =(1 in 10).

Solution of Bimeconate of Morphia.—Same strength and same dose as Tincture of Opium. This was introduced into medicine by the Author in 1839; it possesses in an eminent degree the sedative powers of Morphine. Dr. Roots thus writes of it:—"I have taken it myself daily now very nearly four years, and during that period I have frequently prescribed it in my private practice. The result of my observations of its effects on myself and others amounts to this, namely, that it disturbs the head less, that it distresses the stomach less, and that it constipates the bowels less, than any other preparation of Opium. I have taken every other preparation of Opium, but from none of them have I obtained the same degree of quiet rest that I have enjoyed from this Bimeconate of Morphia."

The Author here records a case of a lady who had taken this preparation from 1841 to 1869, a period of twenty-eight years. The late Dr. Chambers and Mr. Benjamin Phillips attended her; they quite thought that she could not live three months, and they decided that full doses of this preparation should be tried. At length enormous doses were given, *a fluid ounce six times in the twenty-four hours.* The result of this was an entire cessation both of the hemorrhage from the lungs and the night perspirations, and she began to gain flesh. After some years the dose was diminished gradually till it amounted to 6 drms. twice in the twenty-four hours, and to this she strictly adhered up to the time above mentioned.

Liquor Opii Sedativus (Battley) has enjoyed a reputation for a long time as an anodyne and sedative superior to Tincture of Opium, but it is somewhat stronger, say, 50 per cent.; dose 10 to 20 minims.

Sydenham's Laudanum.—A vinous preparation of Opium (Ger. Tinct. Opii Crocata). 8 minims are equal to 1 grain of Opium.

Dose.—10 to 20 minims.

Black Drop.—Originally prepared by John Cook, of Manchester. 1 drop is equal to 4 drops of Tincture of Opium.

Dose.—4 to 8 minims.

Jeremie's Laudanum.—Prepared by Savory and Moore. The same dose as Battley's.

Nepenthe.—Prepared by Ferris, of Bristol. Same dose as Tincture of Opium.

Tinctura Thebaica.—Extract of Opium, 4; Proof Spirit, 38 by weight: macerate and filter. In doses from 6 to 10 minims.

Syrupus Morphinæ.—Liquoris Morphinæ Hydrochloratis, 1 oz.; Syrup. Simplicis, 16 oz.

Each fluid ounce contains $\frac{1}{4}$ gr. of the Salt.

Dose.—1 to 2 drms.

OS USTUM.

BONE ASH.

The residue of bones which have been burned to a white ash in contact with air. It consists principally of Phosphate of Calcium mixed with about 10 per cent. of Carbonate of Calcium, and a little Fluoride of Calcium, Silica, and Phosphate of Magnesium.

Used to prepare Calcii Phosphas and Sodii Phosphas.

OVI ALBUMEN.

EGG ALBUMEN.

The liquid white of the egg of *Gallus Banckiva,* var. domesticus.

OVI VITELLUS.

YOLK OF EGG.

The yolk of the egg of *Gallus Banckiva*, var. domesticus.

Contained in Mistura Spiritus Vini Gallici.

OXYMEL. *See* MEL.

OXYMEL SCILLÆ. *See* SCILLA.

Not Official.

PANCREATINE.

Baron Lucien Corvisart made some careful and elaborate experiments with this substance, and published them in 1857. He showed that when Pancreatine and Pepsine were digested together, the properties of both were destroyed.

If Corvisart's conclusions are correct, to introduce Pancreatine into the stomach would doubtless do harm to the digestive power of the stomach.

Pancreatine is not prescribed alone for the reason stated, but is combined with fat or oils, and when thus taken into the stomach does not interfere with the action of the gastric juice, but passes on to the Pancreas and relieves that organ from a portion of its work; besides that, Pancreate of fat, or Pancreatized Cod-Liver Oil, is thus rendered more fit for assimilation; in short, Pancreatized fat or oil does for the duodenum what Pepsine does for the stomach; each has its own properties. Pepsine will not digest fat; Pancreatine will not digest albumenoid substances or meat.

Dr. Dobell contends that the natural state of the Pancreatic Juice may be either *acid* or alkaline in its fresh state, although always acid soon after removal from the body, but that its acidity or alkalinity has nothing to do with its property of emulsifying fat.

PANCREATIC EMULSION.

The process of making Purified Pancreatic Emulsion is divided into three parts. (See "Proceedings of the Royal Society," 1867.)

1. Make Crude Emulsion.
2. Convert the Crude Emulsion into Pancreatized Fat.
3. Make the Purified Emulsion out of the Pancreatized Fat.

1. To make CRUDE EMULSION:—

Fresh Pancreas of the pig freed from fat and all extraneous matter, 25 lbs.; Lard 20 lbs.; Water, 3 gallons: bruise the Pancreas in a marble mortar, then add the lard, beat and mix well together, adding the water little by little as it becomes absorbed till 3 gallons are used. Strain by squeezing through muslin.

2. To make PANCREATIZED FAT:—

Treat the Crude Emulsion with Ether, in the proportion of three parts of Ether to one of Emulsion. Mix well, and allow the mixture to stand till two strata are formed, —(*a*) an ethereal solution of pancreatized fat at the top, (*b*) a watery stratum at the bottom. Decant the ethereal stratum and filter, put it into a proper still, and recover the Ether by distillation. The result is Pancreatized Fat.

3. To make PURIFIED PANCREATIC EMULSION:—

Pancreatized Fat, 2; Rectified Spirit, 1; Distilled Water, 3; Oil of Cloves, a sufficiency: mix gradually in a marble mortar, adding the spirit and water little by little, and enough oil of Cloves to give a slight flavour.

Tests.—The "Pancreatized Fat," when made into Lead Plaster by Oxide of Lead, should yield glycerine.

The "Watery Stratum" left after decanting the ethereal stratum of pancreatized fat (No. 2) should yield no glycerine.

The "Purified Pancreatic Emulsion" should be permanent, and should have an acid reaction.

Dose.—From 1 to 4 drms. mixed in milk or water, from once to four times in twenty-four hours.

PAPAVERIS CAPSULÆ.

POPPY CAPSULES.

The nearly ripe capsules of the White Poppy, *Papaver somniferum*, dried; from plants cultivated in Britain.

Medicinal Properties.

Similar to Opium, but weaker and of uncertain strength.

(Austr. Belg. Dan. Ger. and Russ.; Fr. (Pavot); not in U.S.)

Preparations.

DECOCTUM PAPAVERIS.

Poppy Capsules, bruised, 2 oz.; Distilled Water, 30 oz.: boil ten minutes in a covered vessel, and strain; then pour over the contents of the strainer as much Distilled Water as will make the strained product 20 oz. =(1 in 10).

An external soothing application, applied warm.

EXTRACTUM PAPAVERIS. Intense brown.

Poppy Capsules, freed from seeds, in No. 20 powder, 16 oz.; Rectified Spirit, 2 oz.; boiling Distilled Water, a sufficiency: mix the Poppy Capsules with 40 oz. of the water, stirring them frequently during twenty-four hours, then pack in a percolator, and pass water slowly through them until about 160 oz. have passed through, or until the Poppy Capsules are exhausted. Evaporate the liquor by a water bath to 20 oz; when cold, add the spirit. After twenty-four hours, filter the liquid and evaporate on a water bath to a pilular consistence.

Dose.—2 to 5 grs.

(Belg. and Fr.; not in the other Pharmacopœias.)

SYRUPUS PAPAVERIS. Intense brown.

Poppy Capsules, freed from seeds and reduced to No. 20 powder, 36 oz.; Rectified Spirit, 16 oz.; Refined Sugar, 64 oz.; boiling Distilled Water, a sufficiency. Infuse the Poppy Capsules in 80 oz. of the water for twenty-four hours, stirring frequently, then pack in a percolator, and adding more of the water, allow the liquor slowly to pass until 320 oz. have been collected, or the Poppies are exhausted; evaporate the liquor by a water bath until it is reduced to 60 oz.; when quite cold, add the spirit, let the mixture stand for twelve hours, and filter. Distil off the spirit, evaporate the remaining liquor to 40 oz., and then add the sugar; the product should weigh 104 oz., and measure 78¾ oz., and should have the sp. g. 1·330. =(1 in nearly 2¼).

Dose.—1 drm.; 10 to 20 minims for children, increasing cautiously in consequence of their susceptibility to the influence of Opium.

In this process the spirit is added to the cooled decoction, and thus coagulates the gummy matters; the filtered liquor, now being made into a syrup with the sugar, will be preserved from fermentation even in hot weather.

(Austr. Syr. Diacodii, about 1 in 18; Belg. Syr. Diacodii with alcoholic *extract* and simple syrup, 1 in 100; Dan. about 1 in 12; Fr. Sirop Diacode, 1 of extract of Opium in 2000; Ger. 1 in 10; Russ. about 1 in 14; not in U.S.)

Not Official.

EXTRACTUM LIQUIDUM.—The liquid obtained by the process for making the syrup (previous to adding the spirit and the sugar), 3; Rectified Spirit, 1: mix.

Dose.—30 to 60 minims.

Decoctum Concentratum is the liquid extract without the spirit.

PARAFFINUM DURUM.

HARD PARAFFIN.

Syn. Paraffin Wax; Solid Paraffin.

[NEW.]

A mixture of several of the harder members of the Paraffin series of hydrocarbons; usually obtained by distillation from shale, separation of the liquid oils by refrigeration, and purification of the solid product.

Colourless, inodorous, and tasteless.

Sp. g. ·82 to ·94.

Melting point. A very wide range is given in the B. P. from 110° to 145° F. (43·3° to 62·8° C.), and the consistency of the ointments may vary considerably. There is also a great difference in the commercial value of Paraffin melting at 110° and that at 145° F.

Insoluble in Water, sparingly soluble in Absolute Alcohol, slightly soluble in Ether.

It should leave no residue on ignition.

(Belg. and Ger. Paraffinum Solidum (melts at 74° to 80° C.); Fr. Paraffine (melts 44° to 65° C.); not in the others.)

Used in the preparation of Unguentum Acidi Borici, U. Acidi Carbolici, U. Acidi Salicylici, U. Eucalypti, U. Glycerini Plumbi Subacetatis, U. Hydrargyri Oxidi Rubri, U. Potassæ Sulphuratæ, U. Sulphuris Iodidi, U. Veratrini.

PARAFFINUM MOLLE.

SOFT PARAFFIN.

Syn. Petrolatum; Unguentum Paraffinum.

[NEW.]

A semi-solid mixture containing some of the softer or more fluid members of the Paraffin series of hydrocarbons; usually obtained by purifying the less volatile portions of Petroleum.

Now included in B. P.; was a Not Official in Companion 1874.

It is known in commerce by various fanciful names.

White or yellowish, translucent and soft.

Free from acidity, alkalinity, or any unpleasant odour or flavour, even when warmed to 120° F. (48·9° C.).

Sp. g. at the melting point, ·840 to ·870.

Melts at 95° to 105° F. (35° to 40·5° C.), or even somewhat higher; volatilizes without giving acrid vapours, and burns with a bright flame, leaving no residue.

Insoluble in Water, slightly soluble in Absolute Alcohol, freely in Ether, Chloroform and Benzol, Oil of Turpentine, the fixed and volatile oils.

It is not saponified by solutions of alkalies.

U.S.P. Petrolatum melting point 40° C. to 51° C. (104° F. to 125° F.), the first constituting the softer and the second the firmer variety. When Petrolatum is ordered, without specifying the melting point, that which liquifies at about 40° C. is to be dispensed.

Tests.—If 5 grms. be digested for half hour with 5 grms. of Soda and 25 grms. of Water, the aqueous layer separated and supersaturated with diluted Sulphuric Acid, no oily substance should separate (absence of fixed oils or fats of vegetable or animal origin, or of resin).

When liquefied and agitated with Sulphuric Acid (sp. g. 1·540) should not acquire a dark colour within two hours (absence of readily carbonised organic impurities.)

(Belg. Paraffina Mollis; Fr. Pétroléine; Ger. Ung. Paraffini; U.S. Petrolatum; not in the others.)

Used in the preparation of Unguentum Acidi Borici, U. Acidi Carbolici, U. Acidi Salicylici, U. Eucalypti, U. Glycerini Plumbi Subacetatis, U. Hydrargyri Oxidi Rubri, U. Hydrargyri Nitratis Dilutum, U. Potassæ Sulphuratæ, U. Sulphuris Iodidi, U. Veratrini, U. Zinci Oleati.

Not Official.

PARALDEHYDE.

$C_6H_{12}O_3$.

A colourless liquid of peculiar odour and pungent taste. Its vapour density is three times that of Aldehyde (C_2H_4O). Its specific gravity at 15° C. is 0·998. It boils at 124° C., and crystallises when cooled below 10° C.

Soluble 1 in 8½ of Water; in all proportions of Alcohol and Ether.

Medicinal Properties.

Hypnotic. Gives quiet and refreshing sleep. Has a marked action on the kidneys, increasing flow of urine. It does not give rise to any unpleasant symptom, as headache, &c. Is a valuable remedy in mania, melancholia, and other nervous affections, as well as the sleeplessness that accompanies acute bronchial catarrh, lobar pneumonia, and heart diseases.—*B. M. J.*, Feb. 3, 1883, p. 215.

Paraldehyde may not take the place of chloral in everyday prescribing, but it must supplant it in those unhappily numerous cases in which the action of the sedative upon the heart is to be feared, and yet where sleep is so much to be desired. —*Lancet*, Jan. 31, 1885, p. 201.

The drug is given off by the lungs, and may be detected in the breath twelve or more hours afterwards.

Dose.—30 to 60 (or even 90) minims dissolved in 1 oz. or 1½ oz. of water. A smaller dose repeated in an hour is more effective than a large dose. It has a pungent taste, which may be lessened by the addition of Tincture of Orange and Syrup.

PAREIRÆ RADIX.

PAREIRA ROOT.

The dried root of *Chondodendron Tomentosum*.

Imported from Brazil.

Several kinds have been imported; a good deal of the stem, which closely resembles the root, is also imported, and is said to be much less efficacious.

(Fr.; U.S.; not in the others.)

Medicinal Properties.

Tonic, aperient, and diuretic. In calculous affections, chronic inflammation, and ulceration of the kidneys and bladder: strongly recommended by the late Sir B. Brodie for its action on the mucous membrane of the bladder.

Dose.—Of the powder, 30 to 60 grs.

Best prescribed with Opium.

Preparations.

DECOCTUM PAREIRÆ. [ALTERED].

Pareira Root, in No. 20 Powder, 1¼; Distilled Water, 20: boil fifteen minutes, and strain; add water to measure 20. =(1 in 16).

Quantity of Pareira reduced from 1½ to 1¼.

(Not in the other Pharmacopœias.)

Dose.—1 to 2 oz. three or four times a day.

EXTRACTUM PAREIRÆ. Intense brown.

Pareira Root, in No. 40 powder, 1; boiling Distilled Water, 10, or a sufficiency: digest the Pareira with 1¼ of water for twenty-four hours, then pack in a percolator, and add water, till, by slow percolation, 10 has passed through, or the Pareira is exhausted. Evaporate by a water bath to a pilular consistence.

Dose.—10 to 30 grs.

EXTRACTUM PAREIRÆ LIQUIDUM. Intense brown. [ALTERED.]

Dissolve 4 of Extract of Pareira in a sufficient quantity of a mixture, of 1 of Rectified Spirit and 3 of Water, to form 16 of Liquid Extract. Filter if necessary. =(1 Extract in 4).

It is now made with Extract of Pareira, which makes it more uniform in strength.

(U.S. 1 in 1 with glycerine.)

Dose.—½ to 2 drms.

INCOMPATIBLES.—The persalts of Iron, Salts of Lead, Tincture of Iodine.

Not Official.

PARIETARIA.

PELLITORY OF THE WALL.

A tablespoonful of the preserved Juice, or 10 grs. of the Extract, three times a day; most efficacious in dropsy.

PEPSIN.

PEPSIN.

A preparation of the mucous lining of a fresh and healthy stomach of the pig, sheep, or calf.

The stomach of one of these animals recently killed having been cut open and laid on a board with the inner surface upwards, any adhering portions of food, dirt, or other impurity, are to be removed, and the exposed surface slightly washed with cold water; the cleansed mucous membrane is then to be scraped with a blunt knife or other suitable instrument, and the viscid pulp thus obtained is to be immediately spread over the surface of glass or glazed earthenware, and quickly dried at a temperature not exceeding 100° F (37·8° C.) The dried residue is to be reduced to powder and preserved in a stoppered bottle.

A light yellowish-brown powder, having a faint but not disagreeable odour, and a slightly saline taste, without any indication of putrescence.

Very little soluble in water or spirit.

Tests.—Two grains of it, with an ounce of Distilled Water, to which five minims of Hydrochloric Acid have been added, form a mixture in which at least 100 grains of hard-boiled white of egg (passed through wire gauze of 36 measures per linear inch, and made of No. 32 brass or copper wire) will dissolve on their being well mixed, digested, and well stirred together for about thirty minutes, at a temperature of 130° F. (54·4° C.)

Dose.—2 to 5 grains.

M. Hottot-Boudault has discovered a means of getting rid of the epithelium, and has produced a Pepsin which contains neither starch nor sugar of milk, and which does not undergo decomposition. It is the strength ordered in the British Pharmacopœia. The author has undertaken the agency of this preparation, and for the sake of distinction, as well as a guarantee that this preparation should be always supplied when prescribed, it should be written *Pepsine Squire.*

Dose.—2 to 5 grains in powder or in pill made with glycerine.

The importance of Pepsin in aiding digestion has been justly valued by the profession for a very long period; before the method of preserving it was discovered, the scrapings of calves' stomachs were employed when gastric juice was found to be deficient.

When Sir James Clark went to the French Exhibition in 1855 with her Majesty he brought some of the preparation of M. Boudault over with him, which enabled the medical men of this country to give it a trial; it has been therefore an established remedy for more than thirty years.

It is very remarkable that when meat is macerated with water and Hydrochloric Acid, it becomes putrid in a very short time, but when sufficient Pepsin has been added to digest the meat, it remains perfectly sweet for a long time. May we not conclude from this, that properly digested food produces no inconvenience, whilst the undigested food decomposes in its passage, giving rise to noxious gases?

(Belg. Fr. Ger. Russ. and U.S.; not in Austr. or Dan.)

PHOSPHORUS.

PHOSPHORUS.

P, eq. 31.

A non-metallic element obtained from bones.

A semi-transparent colourless wax-like solid, which emits white vapours when exposed to the air.

Sp. g. 1·770. Melts at 110° F. (43·3° C.), and ignites in the air at a temperature a little above its melting point.

Slightly soluble in pure Ether; 1 in 25 of Chloroform; 2 in 1 of Bisulphide of Carbon, about 1 in 60 of Olive Oil; also in melted fats; sparingly in boiling Rectified Spirit; insoluble in water.

(Belg. Dan. Fr. Ger. Russ. and U.S.; not in Austr.)

Used for making Acidum Phosphoricum Concentratum.

Medicinal Properties.

Given to improve nerve tone, or to repair nerve tissue, it acts as a powerful general stimulant, principally on the kidneys and genital organs, exciting venereal appetite; it should be given with caution, as too free a use of it leads to a gradual decay of genital functions, and to general paralysis. The preparations are Oleum and Pilula Phosphori, and it has been combined with Cod-Liver Oil and other menstrua, but the pills containing $\frac{1}{30}$th of a grain in each seem to be the most convenient form. The Hypophosphites of Sodium and of Calcium are other forms of giving loosely combined Phosphorus.

Preparations.

OLEUM PHOSPHORATUM. Straw Colour. [ALTERED.]

Phosphorus, 16 grs.; Almond Oil, previously heated to 300° F. (149° C.) for 15 minutes and allowed to cool, and filtered, 4 oz.

Put them into a bottle capable of holding 4½ oz., and heat them in a water bath to 180° F. (82·2° C.) removing the stopper two or three times to allow the escape of expanded air, then frequently shake until dissolved. =(about 1 in 100).

This preparation is ⅓ stronger than that of B.P. 1874.

Dose.—5 to 10 mins.

(Belg. 1 and 100 Olive Oil; Fr. and U.S. 1 in 100 Almond Oil and Ether; Russ. 1 in 100 Almond Oil; not in the others.)

PILULA PHOSPHORI.

Phosphorus, 3 grs.; Balsam of Tolu, 120 grs.; Yellow Wax, 57 grs.; Curd Soap, 90 grains.

Put the Phosphorus and Balsam of Tolu into a mortar, previously half filled with hot water; when the Phosphorus is melted, and the Balsam has become sufficiently soft, rub them together beneath the surface of the water until no particles of Phosphorus are visible, the temperature being maintained at or near 140° F. (60° C.) Add the Wax, and when it softens blend the whole thoroughly together. Should be kept immersed in water. When dispensed, every 2 grs. of the product is to be incorporated with one grain of Curd Soap, a few drops of Rectified Spirit being used, if necessary, to soften the whole, 3 grains of the mass (including Soap) = $\frac{1}{30}$ grain of Phosphorus. =(1 in 90).

Dose.—2 to 4 grs.

Not Official.

Pilula Phosphori c. Sevo.—Phosphorus, 10 grs.; Mutton Suet, 500 grs. Powdered Liquorice, 290 grs.; Powdered Mastic, 100 grs. Melt the Suet, add the Phosphorus, digest with agitation over a water bath till dissolved, now pour the Solution on to the powder previously well mixed and thoroughly dried, and place in stoppered bottle, standing in very hot water, so that the melted suet is not chilled, but readily mixes by violent agitation with the powder. When divided into 3-grain pills, each pill contains $\frac{1}{30}$th of a grain of Phosphorus.

Not Official.

PHYSALIS ALKAKENGI.

WINTER CHERRY.

The Solanum Vesicarium of the old dispensatories.

The ripe berries are full of seeds; they yield half their weight in juice.

Tinctura.—Dried Berries, 2; Proof Spirit, 8: digest 7 days.

Diuretic, febrifuge. Dose of the tincture, 1 to 2 drs.

PHYSOSTIGMATIS SEMEN.

CALABAR BEAN.

The dried seed of *Physostigma venenosum*, Western Africa.

It yields its virtues to Alcohol, and imperfectly to Water.

The cotyledons when moistened with Solution of Potash become a pale yellow.

28 lbs. of Calabar Beans yielded 2·07 per cent. of extract by the B. P. process; this extract yielded 5·74 per cent. of alkaloids, which is equal to nearly ·12 per cent. of alkaloids in the Beans.

The same powder treated with boiling Rectified Spirit in an exhaustion apparatus yielded 4·66 per cent. of extract; which extract yielded 3·2 per cent. of alkaloids, which is equal to nearly ·15 per cent. of alkaloids in the Beans.

Dose.—In powder, 1 to 4 grs.

(Belg. Semen Calabariense; Dan. and Russ. Semen Physostigmatis; Fr. Fève du Calabar; U.S. Physostigma; not in Austr. or Ger.)

Stimulates the liver, but not powerfully unless given in large doses.—Dr. Rutherford.

Medicinal Properties.

An interesting account of *Traumatic Tetanus* being cured by Calabar Bean, $\frac{1}{8}$ gr. of the Extract given every hour, increasing the dose according to symptoms.—*Vide Lancet*, April 4th, 1868.

Preparations.

EXTRACTUM PHYSOSTIGMATIS. Deep brown.

Calabar Bean, in No. 40 powder, 1; Rectified Spirit, 5: macerate the bean for forty-eight hours in one-fourth of the spirit in a closed vessel, agitating occasionally, then transfer to a percolator, and when the fluid ceases to pass, add the remainder of the spirit, so that it may slowly percolate through the powder; subject the residue of the bean to pressure, adding the pressed liquid to the product of the percolation, filter, distil off most of the spirit, and evaporate what is left in the retort by a water bath to the consistence of a soft extract.

Dose.—$\frac{1}{16}$ to $\frac{1}{4}$ gr. three times daily.

Subcutaneous injection. $\frac{1}{3}$ gr. in 10 mins. of water for tetanus.

(Belg. Dan. Fr. and U.S.; Russ. with Spirit, Water, and Acetic Acid.; not in Austr. or Ger.)

Not Official.

Tinctura.—Bean, in coarse powder, 1; Rectified Spirit, 5: digest fourteen days.

Dose.—10 minims, gradually increasing.

(Fr. 1 and 5; Dan. and U.S. 1 and 10; not in the others.)

PHYSOSTIGMINA.

PHYSOSTIGMINE.

Syn. Eserine.

$C_{15}H_{21}N_3O_2$, eq. 275.

[NEW.]

An alkaloid obtained from the alcoholic extract of Calabar Bean by dissolving the extract in Water, adding Bicarbonate of Sodium, shaking the mixture with Ether, and evaporating the ethereal liquid.

(Fr.; not in the other Pharmacopœias.)

Preparation.

LAMELLÆ PHYSOSTIGMINÆ. [NEW.]

Discs of Gelatine, with some Glycerine, each weighing about $\frac{1}{50}$ gr., and containing $\frac{1}{1000}$ gr. of Physostigmine.

Now included in B. P.; was a Not Official in Companion 1867.

Books of Calabar paper and of gelatine, with divided squares, are used by oculists to contract the pupil of the eye (after the use of Belladonna), in order to bring back the vision to the normal state.

Not Official.

PHYSOSTIGMINÆ SALICYLAS.

Syn. ESERINÆ SALICYLAS.

Colourless acicular crystals, becoming coloured on exposure to light and air. Soluble 1 in 130 of Water; 1 in 15 of Rectified Spirit.

(Ger. and U.S.; not in the others.)

Not Official.

PHYSOSTIGMINÆ SULPHAS.

Syn. ESERINÆ SULPHAS.

An amorphous powder, very deliquescent and very soluble in Water.

(Fr.; not in the other Pharmacopœias.)

Preparation.

GUTTÆ ESERIÆ.—Sulphate of Eserine, 2 grs.; Water, 1 oz.—*London Ophthalmic.*

PILOCARPINÆ NITRAS.

NITRATE OF PILOCARPINE.

$C_{11}H_{16}N_2O_2$, HNO_3, eq. 271.

[NEW.]

The nitrate of an alkaloid obtained from extract of Jaborandi by shaking it with Chloroform and Alkali, evaporating the Chloroformic Solution, neutralizing the product with Nitric Acid, and purifying by recrystallization.

Now included in B. P.; was a Not Official in Companion 1880.

A white crystalline powder or in acicular crystals.

Soluble 1 in 5 of Water; 1 in 50 of Rectified Spirit.

Tests.—Strong Sulphuric Acid forms with it a yellowish solution, which on the addition of Bichromate of Potassium gradually acquires an emerald-green colour. It leaves no ash when burned with free access of air.

(Not in the other Pharmacopœias. Fr. Pilocarpine; Belg. Ger. and U.S. Pilocarpinæ Hydrochloras.)

Medicinal Properties.

A powerful diaphoretic. It contracts the pupil of the eye.

B. P. Dose.—$\frac{1}{20}$ to $\frac{1}{2}$ gr.

Not Official.

GUTTÆ PILOCARPIÆ.—Nitrate of Pilocarpine, 2 grs.; Distilled Water, 1 oz.—*London Ophthalmic.*

PILULÆ.

PILLS.

This class of medicine, so convenient and portable, was introduced in the earliest Pharmacopœias, and some of them remain unchanged to the present day. We may mention the Pilula Rufi, which has for at least two hundred years maintained the same proportions, and is now called Pil. Aloes et Myrrhæ. Pills have been rolled in flour, starch, magnesia, liquorice powder, and on the Continent in lycopodium; also, enveloped in silver leaf, and more recently coated with Ethereal Solution of Tolu or with Gelatine or French chalk for the purpose of preventing them from becoming dry and hard, as well as to shield them from the palate, and so prevent their being tasted. When pills are intended to pass through the stomach, as in the case of Aloes, so as to act entirely on the lower bowels, they are made up with Alcohol, and varnished with an ethereal solution of Tolu.

The following are contained in the British Pharmacopœia, the formulas for which will be found under the names of the substances from which they are prepared:—

	Proportions of active ingredient in the mass.
PILULA ALOES BARBADENSIS	1 in 2.
PILULA ALOES ET ASAFŒTIDÆ	Aloes 1, Asafœt. 1 in 4.
PILULA ALOES ET FERRI	Aloes 1, Iron ¾ in 5¼.
PILULA ALOES ET MYRRHÆ	Aloes 1, Myrrh ½ in 3.
PILULA ALOES SOCOTRINÆ	1 in 2.
PILULA ASAFŒTIDÆ COMPOSITA	Asafœt. 1, Galb. 1 in 3½.
PILULA CAMBOGIÆ COMPOSITA	about 1 in 6.
PILULA COLOCYNTHIDIS COMPOSITA	Col. 1, Aloes 2, Scam. 2 in 6.
PILULA COLOCYNTHIDIS ET HYOSCYAMI	Pil. Col. Co. 2 Ext. Hyos. 1. in 3.
PILULA CONII COMPOSITA	Ext. 2½, Ipec. ½ in 3.
PILULA FERRI CARBONATIS	Saccharo-Carbonate 1 in 1¼.
PILULA FERRI IODIDI	Iodide of Iron 1 in 3½.
PILULA HYDRARGYRI	Mercury 1 in 3.
PILULA HYDRARG. SUBCHLORIDI COMPOSITA	1 Calomel in 5.
PILULA IPECACUANHÆ CUM SCILLA	3 Dover's Powder in 7.
PILULA PHOSPHORI	In 3-gr. Pills, each Pill containing $\frac{1}{30}$ gr. of Phosphorus.
PILULA PLUMBI CUM OPIO	Acet. Lead 6, Opium 1 in 8.
PILULA RHEI COMPOSITA	Rhubarb 3, Aloes 2¼ in 10.
PILULA SAPONIS COMPOSITA	1 Opium in 6 nearly.
PILULA SCAMMONII COMPOSITA	Resin Scam. 1, Resin Jalap 1 in 3¼.
PILULA SCILLÆ COMPOSITA	Squill 1 in 5.

N.B.—The usual dose of all pills is from 5 to 10 grains, unless otherwise directed.

When the penny-post commenced, pills were sent in flat wooden boxes, but were very frequently smashed by the obliterating stamps; the Author therefore had a pillar left in the centre, to act as a bridge, and support the lid from side to centre; this answered perfectly, and pills have thus been sent per post safely up to the present time.

PIMENTA.

PIMENTO.

The dried unripe full-grown fruit of *Pimenta officinalis*.

From the West Indies.

Medicinal Properties.

A warm aromatic stimulant, like Cloves; used as an adjuvant to tonics and purgatives.

Dose.—10 to 30 grs. in powder.

(U.S.; not in the other Pharmacopœias.)

Preparations.

AQUA PIMENTÆ.

Pimento, bruised, 7; Water, 160: distil one-half. =(1 in 11½).

Dose.—1 to 2 oz.

(Not in the other Pharmacopœias.)

OLEUM PIMENTÆ. Colourless at first. Becomes more or less brownish-red by keeping.

The Oil distilled in Britain from Pimento. Sp. g. 1·02.

Soluble in all proportions of Rectified Spirit; about 1 in 50 of Proof Spirit.

When shaken with an equal volume of Solution of Ammonia it forms a soft yellow crystalline mass. This also is the case with Oil of Cloves and partially so with Oil of Cinnamon.

1 minim dissolved in 60 minims of Rectified Spirit, and treated with 1 minim of a very dilute Solution of Ferric Chloride, turns a fine indigo blue colour. This is also the case with Oil of Cloves, which Oil of Pimento very much resembles in chemical constitution.

Dose.—1 to 3 minims, on sugar, in pill, or emulsion.

(U.S.; not in the other Pharmacopœias.)

PINI SYLVESTRIS OLEUM.

[NEW.]

FIR-WOOL OIL.*

The oil distilled from the fresh leaves of *Pinus Sylvestris.*

Colourless, or nearly so, with an agreeable odour.

Now included in B.P.; was a Not Official in Companion 1871.

Sp. g. ·870.

Soluble 1 in 7½ of Rectified Spirit; in all proportions of Absolute Alcohol.

Medicinal Properties.

It is used externally in rheumatism, and as an inhalation with hot water in chronic laryngitis.

Preparation.

VAPOR OLEI PINI SYLVESTRIS. [NEW.]

Fir wool oil, 40 minims; Light Carbonate of Magnesium, 20 grains; Water to 1 ounce: mix.

One fluid drachm in a pint of water at 140° F. for each inhalation.

PIPER NIGRUM.

BLACK PEPPER.

The dried unripe fruit of *Piper nigrum,* chiefly from the East Indies.

Medicinal Properties.

A warm carminative stimulant, producing general arterial excitement. Chiefly used to excite the languid stomach and correct flatulence. Acts on the mucous membrane of the rectum, whence it is useful in hæmorrhoids; also on the membrane of the urethra, similarly to Cubebs. In intermittents it may be used as an adjuvant to more powerful febrifuges, when the stomach is not acted upon by Quinine, as with drunkards.

Dose.—5 to 20 grs. in powder.

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* This is a registered Trade Mark.

(Belg.; Fr. Poivre Noir; U.S.; not in the other Pharmacopœias.)

Contained in Confectio Opii and Pulvis Opii Compositus.

Preparation.

CONFECTIO PIPERIS. Very dark olive-brown.

Black Pepper, in fine powder, 2; Caraway fruit, in fine powder, 3; Clarified Honey, 15: triturate. =(1 in 10).

Dose.—60 to 120 grs.

(Not in the other Pharmacopœias.)

PIX BURGUNDICA.

BURGUNDY PITCH.

A resinous exudation from the stem of the *Pinus Picea*, melted and strained; imported from Germany.

Solubility: almost entirely dissolves 1 in 20 of Rectified Spirit; the greater part dissolves 1 in 1½ of Glacial Acetic Acid.

(U.S.; Belg. Fr. Poix de Bourgogne; Russ. Resina Pini.; not in Austr. Dan. or Ger.)

It is the Thus or Frankincense of Lond. and Dub. Pharmacopœias, which exudes from the spruce fir, and when melted and strained is called Burgundy Pitch.

Preparation.

EMPLASTRUM PICIS. Yellow.

Burgundy Pitch, 26; Common Frankincense (Thus Americanum), 13; Resin, 4½; Yellow Wax, 4½; Expressed Oil of Nutmeg, 1; Olive Oil, 2; Water, 2: add the Oil and the Water to the other ingredients, previously melted together; stir, and evaporate to a proper consistence.

Applied to the chest in chronic pulmonary complaints, to the loins in lumbago, to the joints in chronic articular affections, and to other parts to relieve local pain of a rheumatic character. It acts as a counter-irritant.

(U.S. Yellow Wax 1, Burgundy Pitch 9; Belg. and Fr. Yellow Wax 1, Burgundy Pitch 3; Russ. Resin 2, Yellow Wax 4, Beef Suet 1, Turpentine 1: not in Austr. Dan. or Ger.)

PIX LIQUIDA.

TAR.

A bituminous liquid obtained from the wood of *Pinus sylvestris* (known in this country as the Scotch Pine), and other Pines by destructive distillation.

Thick, viscid, and brownish black, with a peculiar odour. Water agitated with it acquires a yellowish tint and an acid reaction.

Soluble in less than its own bulk of Rectified Spirit or Chloroform, and separates on the addition of water; soluble 1 in 3 of Solution of Soda B.P.; slightly soluble in Olive Oil or Oil of Turpentine.

Medicinal Properties.

Similar to Turpentine. May be used internally in chronic catarrhal affections, and complaints of the urinary passages; also for some chronic skin diseases. Inhaled, the vapour is useful in chronic bronchitis. Also as an external application in cases of lepra, &c.

Dose.—20 to 60 minims, in pills with flour.

(In all the Pharmacopœias; Dan. Pyroleum Pini; Fr. Goudron Végétal, obtained from *Pinus maritima*.)

Preparations.

UNGUENTUM PICIS LIQUIDÆ. Black.

Tar, 5; Yellow Wax, 2: melt together and stir till cold.

Applied in cases of psoriasis, lepra, and scald-head.

This ointment is too hard for use. A proper consistence is obtained by replacing half of the Yellow Wax with Almond Oil (see Not Official).

(Belg. Tar 1, Lard 4; Dan. Pitch 11, Lard 6, Carbonate of Potassium 3; Fr. Pommade de Goudron, Tar 1, Lard 9; U.S. Tar 1, Suet 1: not in Austr. Ger. or Russ.)

Used to remove tetter and in tinea capitis.

Not Official.

UNGUENTUM PICIS MOLLE.—Tar, 5; Yellow Wax, 1; Almond Oil, 1: melt together and stir till cold.

AQUA (TAR WATER).—Stir a pint of Tar with half a gallon of Water for fifteen minutes, and decant.

Dose.—From 1 to 2 pints daily, or may be used as a wash.

(Belg. Aq. Picis Concentrata, Tar 50, Bicarbonate of Sodium 3, Water 200; and Aqua Picis is made with Aq. Picis Conc. 3, Water 97; Fr. Eau de Goudron, Tar 1, Water 200, Pine Sawdust 3; Ger. Tar 1, Pumice 3, Water 10; Russ. Birch Tar 1, Water 30: not in Austr. Dan. or U.S.)

PILULÆ PICIS.—Tar and Liquorice Powder, equal weights mixed, and made into five-grain pills.

Dose.—2 or 3 pills thrice daily.

They are sometimes made of Black Pitch, and taken to relieve hæmorrhoids.

TAR CAPSULES.

Dose.—2 capsules, three or four times a day, as a stimulant and diuretic.

BLACK PITCH.—There are three kinds, Archangel, Swedish, and that obtained from Gas Tar, the latter is without odour. Pitch pills are taken to increase the size and weight of the body.

Not Official.

PLUMBUM.

LEAD.

Pb, eq. 207.

Sp. g. 11·3; fuses at about 617° F (325° C.) Lead occurs in nature as an oxide, and as a sulphide called *galena;* also in saline combination, forming the native sulphate, phosphate, carbonate, chromate, molybdate, tungstate, and arseniate of lead. The native oxide is rare, but galena, the ore from which nearly all the lead of commerce is extracted, is exceedingly abundant.

INCOMPATIBLES. } Are given after Plumbi Subacetatis Liquor.
ANTIDOTES. }

PLUMBI ACETAS.

ACETATE OF LEAD.

Syn. SUGAR OF LEAD.

$\mathbf{Pb\,(C_2H_3O_2)_2\cdot 3H_2O}$, eq. 379.

In white masses of interlaced acicular crystals, slightly efflorescent, having an acetous odour, and a sweet astringent taste.

Solubility: 1 in 2 of Water; 6 in 1 of boiling Water; 1 in 20 of Rectified Spirit; 1 in 2 of Glycerine.

Tests.—Its solution in Distilled Water is clear, or is only slightly turbid, and becomes clear on the addition of Acetic Acid, it gives a black precipitate with Hydrosulphuric Acid (Sulphide of Lead), a white with diluted Sulphuric Acid (Sulphate of Lead), and a yellow with Iodide of Potassium (Iodide of Lead). When warmed with Sulphuric Acid, Acetic Acid is given off. 38 grains dissolved in water require for complete precipitation 200 grain-measures of the volumetric solution of Oxalic Acid.

Medicinal Properties.

In small doses it is sedative and astringent, lessening morbid mucous discharges and hemorrhages, and even diminishing natural secretions; whence it is useful in chronic diarrhœa and dysentery. Used in phthisis to check expectoration; in bronchitis to abate profuse secretion. Its use requires caution. It is often followed by a small dose of Acetic Acid, because excess of Acid makes it less injurious to the system. Externally, it is sedative, desiccant, and astringent, diminishing profuse discharges of ulcers; also for injection in gonorrhœa.

In large doses somewhat lessens the secretion of bile, probably by direct action on the liver.—Dr. Rutherford.

Dose.—1 or 2 to 4 grs. in pill; also in solution, with excess of Acetic Acid.

(In all the Pharmacopœias; U.S.; Austr. Ger. and Russ. Plumbum Aceticum; Belg. Acetas Plumbi; Fr. Acétate Neutre de Plomb.)

INCOMPATIBLES.—Sulphuric and Tannic Acids, and their salts.

ANTIDOTES.—Same as under Liq. Plumbi Subacetatis.

Preparations.

PILULA PLUMBI CUM OPIO. Intense brown.

Acetate of Lead, in fine powder, 6; Opium, in fine powder, 1; Confection of Roses, 1: mix.

A four-grain pill contains 3 grs. of Plumbi Acetas. and ½ gr. Pulvis Opii.

Dose.—A four-grain pill every three or four hours for hemorrhage.

(Not in the other Pharmacopœias.)

SUPPOSITORIA PLUMBI COMPOSITA. [MODIFIED.]

Acetate of Lead in powder, 36; Opium in powder, 12; Oil of Theobroma, 132: rub the Acetate of Lead and Opium with 42 of the Oil of Theobroma in a slightly warmed mortar, and add them to the remainder of the Oil of Theobroma previously melted at a low temperature, mix them thoroughly, and pour the mixture while it is fluid into suitable moulds of the capacity of 15 grains.

The above makes 12 suppositories.

Benzoated Lard and White Wax are now omitted

Each suppository contains 3 grs. of Acetate of Lead and 1 gr. of Opium.

UNGUENTUM PLUMBI ACETATIS. White; sweet at first; becomes rancid by keeping.

Acetate of Lead, in fine powder, 12 grs.; Benzoated Lard, 1 oz.: mix =(1 in 37½).

(Austr. Acetate of Lead 3, Lard 150, White Wax 50, Water 10; Dan. Acetate of Lead 5, Olive Oil 36, White Wax 9; Russ. (Ceratum) Yellow Wax 12, Olive Oil 12, Acetate of Lead, levigated, 1.)

Not Official.

Lotio Plumbi Acetatis.—Acetate of Lead, 2 grs.; Diluted Acetic Acid, 2 mins.; Water 1 oz.—*London Ophthalmic Hospital.*

Pessaries.—Acetate of Lead, 7; Oil of Theobroma sufficient for one pessary.

Acetate of Lead, 5 grs.; Opium, in powder, 2 grs.; Oil of Theobroma or Stearine sufficient for one pessary.

PLUMBI CARBONAS.

CARBONATE OF LEAD.

A soft, heavy, white powder.

Solubility: insoluble in water; soluble, with effervescence, in Diluted Nitric Acid and Acetic Acid.

Test.—Dissolves in Diluted Acetic Acid without leaving any residue, and the solution, when treated with excess of Sulphuretted Hydrogen, boiled, and filtered (all the Sulphide of Lead separated), gives no precipitate with Oxalate of Ammonium—indicating absence of Calcium.

Medicinal Properties.

Employed externally as an astringent and sedative, or as an ointment for ulcers and inflamed and excoriated surfaces.

(Same as U.S.; Austr. and Russ. Plumbum Carbonicum; Fr. Carbonate de Plomb; Belg. and Ger. Cerussa.)

Preparation.

UNGUENTUM PLUMBI CARBONATIS. Cream colour and inodorous.

Carbonate of Lead, in fine powder, 62 grs.; Simple Ointment, 1 oz.: mix thoroughly. =(1 in 8).

(Belg. 1 in 6¼; Austr. Dan. and Russ. 1 in 3; Ger. 3 in 10; U.S. 1 and 9; Fr. Pommade de Carbonate de Plomb, 1 and 5.)

PLUMBI IODIDUM.

IODIDE OF LEAD.

PbI_2, eq. 461.

Nitrate of Lead, 4; Iodide of Potassium, 4; Distilled Water, a sufficiency: dissolve with heat, the Nitrate of Lead in 30 of water, and the Iodide of Potassium in 10 of water; mix the solutions, collect the precipitate on a filter, wash it with Distilled Water, and dry it with a gentle heat.

Soluble 1 in 2000 of Water; 1 in 300 of boiling Water; soluble also in Solutions of Acetates.

(U.S.; Belg. Ioduretum Plumbi; Fr. Iodure de Plomb; Ger. and Russ. Plumbum Iodatum; not in Austr. or Dan.)

Medicinal Properties.

Used externally as an alterative and discutient.

Preparations.

EMPLASTRUM PLUMBI IODIDI. Pale orange. [ALTERED.]

Iodide of Lead, 1; Lead Plaster, 8; Resin, 1: add the Iodide of Lead in fine powder to the Plaster and Resin previously melted at as low a temperature as possible, and mix them intimately. =(1 in 10).

Lead Plaster is now used in the place of Soap Plaster, and Resin in the place of Resin Plaster.

UNGUENTUM PLUMBI IODIDI. Bright orange.

Iodide of Lead, in fine powder, 62 grs.; Simple Ointment, 1 oz.: mix thoroughly. =(1 in 8).

(Fr. and U.S. 1 and 9; not in Austr. Belg. Dan. Ger. or Russ.)

Not Official.

Pessary.—Iodide of Lead, 5 grs.; Oil of Theobroma sufficient for one pessary.

PLUMBI NITRAS.

NITRATE OF LEAD.

$Pb(NO_3)_2$, eq. 331.

Soluble 1 in 2 of Water; 10 in 9 of boiling Water; sparingly in Rectified Spirit.

Used to produce Plumbi Iodidum.

(U.S. and Russ.; not in the other Pharmacopœias.)

PLUMBI OXIDUM.

Syn. Lithargyrum. 1864.

PbO, eq. 223.

In heavy scales of a pale brick-red colour.

Tests.—Soluble in diluted Nitric Acid and in Acetic Acid without effervescence. Its solution in diluted Nitric Acid, when supersaturated with Ammonia and cleared by filtration, does not exhibit a blue colour—indicating absence of Copper.

Absence of Iron is also important; it sometimes contains Iron, and will not then make a white plaster.

Medicinal Properties.

For external application only, to abate inflammation.

(In all the Pharmacopœias.)

Preparations.

EMPLASTRUM PLUMBI. Pale yellow.

Oxide of Lead, in very fine powder, 1; Olive Oil, 2 (by weight); Water, 1: boil all the ingredients together gently by the heat of a steam-bath, and keep them simmering for 4 or 5 hours, stirring constantly until the product acquires the proper consistence for a plaster, adding more water during the process if necessary.

Contained in Emp. Ferri, Emp. Galbani, Emp. Hydrarg., Emp. Resinæ, Emp. Saponis.

This plaster of former Pharmacopœias wanted adhesiveness. The British Pharmacopœia directs long boiling, which secures sufficient tenacity, and it now resembles the famous strapping-plaster of Dr. Scott, of Bromley. Care, however, must be taken to use Italian Oil; Gallipoli and Spanish oils will not make an adhesive plaster.

(Same as Austr. Empl. Diachylon Simplex, Litharge 1, Lard 2; Belg. Litharge 2, Olive Oil 2, Water 1, Lard, 2; Dan. Litharge 5, Olive Oil 9, Water 1; Fr. Litharge 1, Lard 1, Olive Oil 1, Water 2; Ger. and Russ. Litharge 1, Lard 1, Olive Oil 1, Water *q.s.*; U.S. Empl. Plumbi, Litharge 6, Olive Oil 30, Water *q.s.*)

Equal weight of Lead Plaster and Soap Plaster melted together is an excellent plaster for corns.

Not Official.

Ung. Diachylon. Hebræ (modified by Professor Kaposi).—Simple Lead Plaster 1; Vaseline, 1: melt with heat.

Dr. Pearson's Cerate.—Lead Plaster 4, Yellow Wax 1, Oil of Almonds 3: mix.

PLUMBI SUBACETATIS LIQUOR.

SOLUTION OF SUBACETATE OF LEAD.

Syn. Liquor Plumbi Diacetatis.

Subacetate of Lead, $Pb_2O(C_2H_3O_2)_2$, eq. 548;
dissolved in water.

A dense, clear, colourless liquid, with alkaline reaction and sweet astringent taste.

Acetate of Lead, 5; Oxide of Lead, in powder, 3½; Distilled Water, 20: boil half an hour, constantly stirring; filter, and make 20.

Tests.—Sp. g. 1·275. 284·5 grs. by weight require for perfect precipitation 500 grain-measures of the volumetric solution of Oxalic Acid.

The test corresponds to 24 per cent. of the Subacetate of Lead.

Medicinal Properties.

When largely diluted, it is used externally as an astringent and sedative for inflammation arising from sprains, bruises, &c.; applied by means of cloths kept wet. As an astringent gargle (½ drm. to 6 oz. Rose Water).

(In all the Pharmacopœias; U.S. sp. g. 1·228; Austr. Plumbum Acetum Solutum, sp. g. 1·230—1·240; Belg. Subacetas Plumbi Liquidus, sp. g. 1·240; Dan. Solutio Subacetatis Plumbici, sp. g. 1·170—1·175; Fr. Sous-Acétate de Plomb Liquide, sp. g. 1·320; Ger. Liquor Plumbi Subacetici, sp. g. 1·235—1·240; Russ. Plumbum Aceticum Basicum Solutum, sp. g. 1·236—1·240.)

Incompatibles.—Hard Water, Mineral Acids, and Salts, Vegetable Acids, Alkalies, Lime Water, Iodide of Potassium, all astringents, preparations of Opium, Albuminous Liquids.

Antidotes.—In case of poisoning with Acetate of Lead, the antidotes are—Sulphate of Sodium, Epsom Salts, succeeded by emetics, and afterwards by Opium and liberal libations of Milk, or white of Egg mixed with water.

A course of Iodide of Potassium is useful in eliminating Lead from the system.

It is said that men who work in the lead mines, living chiefly on milk, are not subject to lead poisoning.

Lancet, Oct. 29, 1881, p. 779, gives an unusual source of Lead poisoning, from shot found in a bottle full of Port wine; an appreciable quantity of Lead was found in solution.

Preparations.

GLYCERINUM PLUMBI SUBACETATIS. [NEW.]

Acetate of Lead, 5; Oxide of Lead in powder, 3½; Glycerine, 20; Distilled Water, 12: mix and boil a quarter of an hour; then filter and evaporate until the water is dissipated.

Now included in B.P.; was a Not Official in Companion 1877, and in a dilute form in 1874.

LIQUOR PLUMBI SUBACETATIS DILUTUS. Slightly opaque, with a deposit.

Solution of Subacetate of Lead, 1; Rectified Spirit, 1; Distilled Water, 78: mix and filter. =(1 in 80).

Brit. Pharm. gives the proportions 1, 1, and 79, which is clearly an oversight.

(U.S. 3 and 100; Austr. 1 and 50; Dan. Fr. (Lotion avec l'Acétate de Plomb); Ger. and Russ. (Aq. Plumbi), 1 in 50.)

UNGUENTUM GLYCERINI PLUMBI SUBACETATIS. [NEW.]

Glycerine of Subacetate of Lead, 1 (by weight); Soft Paraffin, 4; Hard Paraffin, 1⅓: melt the hard and soft Paraffins together, then add the Glycerine of Lead and stir till cold.

Now included in B. P.; was in Companion 1877.

(Belg. Unguent. Subacetatis Plumbi, 1 in 3; Fr. Cérat Saturné, 1 in 10; Ger. Unguentum Plumbi, 1 in 12½; Russ. 1 in 12; U.S. 1 in 5; not in Austr. or Dan.)

Not Official.

Cremor Lithargyri (Dr. Kirkland).—Solution of Diacetate of Lead, 1; Cream, 8: mix.

Gargarisma Plumbi.—Solution of Diacetate of Lead, 1; Barley Water, 30: mix.

Lotio Plumbi Diacetatis.—From 3 to 7 minims to an ounce of water.

PODOPHYLLI RHIZOMA.

PODOPHYLLUM RHIZOME.

The dried rhizome and rootlets of *Podophyllum peltatum*.

Imported from North America.

(Belg. Fr. and U.S.; not in Austr. Dan. Ger. or Russ.)

Medicinal Properties.

An active cathartic. Applicable to cases where brisk purging is required; combined generally with Henbane. Used in the place of Calomel as a cholagogue and purgative.

Dose.—10 to 20 grs. in powder, but rarely used in England, the resin being generally prescribed.

Preparations.

RESINA PODOPHYLLI. A greenish-yellow powder. [MODIFIED.]

Podophyllum Rhizome, in No. 40 Powder, 1; Rectified Spirit, 3¾, or a sufficiency; Distilled Water, a sufficiency: exhaust the podophyllum by percolation with the spirit; distil off the greater part of the spirit; slowly pour the remaining liquid into three times its volume of water, constantly stirring; let it stand twenty-four hours; collect the resin which falls, wash on a filter with distilled water, and dry in a stove.

Hydrochloric Acid is now omitted from the process.

Solubility: it forms a cloudy solution with Rectified Spirit and a clear one with Ammonia; about 60 per cent. dissolves in pure Ether.

Given in pills with Soap and Hyoscyamus, Rhubarb or Aloes.

A very powerful stimulant of the liver, and also of the intestine.—Dr. Rutherford.

Dose.—⅙ to ½ or even 2 grs. have been given in obstinate cases, but it is best to begin with ¼, and may be prescribed with Aloes and Soap.

(Belg. Fr. Ger. Russ. and U.S.; not in Austr. or Dan.)

TINCTURA PODOPHYLLI. [NEW.]

Resin of Podophyllum, 80 grains; Rectified Spirit, 10 oz.: dissolve and filter.

1 fluid drachm equals 1 grain of Podophyllin.

Now included in B. P.; was a Not Official in Companion 1877.

Dose.—15 to 30 minims.

Not Official.

Tinctura Podophylli Ammoniata.—Resin of Podophyllum, 24 grs.; Rectified Spirit, 2 oz.; Liquor Ammonia, 1 oz.: dissolve.

SSIUM.

Humphrey Davy in 1807. It is a
wax, of a silver-white colour, but
ssumes a leaden colour. It has so
n thrown on water it combines
the Hydrogen on fire, and a

SSA CAUSTICA.

POTASH.

ssium. **KHO**, eq. 56.

quescent, powerfully alkaline and

in 3½ of Rectified Spirit: 1 in 3 of
if stronger than this the Alcohol

ed with Nitric Acid gives only scanty
of Silver and Chloride of Barium
tes. 56 grains dissolved in Water
require for neutralization at least
ric solution of Oxalic Acid.

Properties.

nployed for making caustic issues.
tion of tumours and the surface of

: Russ. Kalium Causticum Fusum.)

rations.

Colourless. [Modified.]

Lime, washed, 12: Distilled Water.
tassium in the water, and having
at in a clean iron vessel, gradually
and continue the ebullition for ten
w the insoluble matter to subside,
d bottle of green glass by means
if necessary to make it correspond
ing power.

about 13 of Slaked Lime washed with
little of the washings acidified with
f Silver.

ght) of Hydrate of Potassium.

stica Soluta, sp. g. 1·330—1·340: Ger.
1·146; Russ. Liquor Kali Caustici,
cent. of Potash: Dan. Solut. Hydrat.
; not in Austr. or Fr.)

by weight) requires for neutralization 482 grain-measures of the volumetric solution of Oxalic Acid. It does not effervesce when added to an excess of diluted Hydrochloric Acid, and when mixed with an equal volume of Distilled Water, it does not give a precipitate with Solution of Lime or Oxalate of Ammonium—indicating absence of Carbonic Acid and Calcium. When it is treated with an excess of diluted Nitric Acid and evaporated to dryness, the residue forms, with water, a nearly clear solution, which is only slightly precipitated with Chloride of Barium (a trace of Sulphates), and Nitrate of Silver (a trace of Chlorides), and is rendered very slightly turbid by Ammonia (a trace of Alumina). When supersaturated with Hydrochloric Acid, it is unaffected by Sulphuretted Hydrogen (absence of Lead).

1 fluid ounce contains 27 grains of Hydrate of Potassium, and has about the same saturating power as Liquor Sodæ.

Medicinal Properties.

Antacid, diuretic, and antilithic. As an antacid in dyspepsia. Useful in many skin diseases dependent upon a morbid condition of the stomach; given as an alterative in inflammation of the serous membrane attended with fibrinous depositions, as in pleuritis, pericarditis, and periostitis; also in scrofula, syphilis, and chronic rheumatism. Externally as a wash in chronic skin diseases, as a stimulating lotion, and as an escharotic against the bite of rabid or venomous animals.

During a course of this, the urine does not become alkaline, but it does when Carbonate of Potassium is taken.

Dose.—15 to 60 minims three times a day in Beer, Milk, or Mistura Amygdalæ.

It acts powerfully on all organic matter, converting flannel into a kind of soft jelly after immersion for five of six hours.

INCOMPATIBLES.—Acids, Acidulous Salts, Metallic Salts, the preparations of Ammonium, Belladonna, Henbane, and Stramonium.

ANTIDOTES.—Diluted Acetic Acid, Citric Acid, Lemon Juice, or any vegetable acids, fixed oils, demulcents.

Not Official.

BRANDISH'S ALKALINE SOLUTION.—American Pearl ashes, 6 lbs.; freshly prepared Quicklime, 2 lbs.; Wood ashes, 2 lbs.; Boiling Water, 6 gallons; or 6, 2, 2, and 60 parts: add first the Lime, then the Pearl ashes, and lastly the Wood ashes to the boiling water, stir well together, let it stand twenty-four hours, and decant the clear liquor.

Dose.—½ to 2 drms. in beer or milk. Given for scrofulous tumours.

POTASSA CUM CALCE (Vienna Paste).—Caustic Potash, 5 drms.; Slaked Lime, 6 drms.; Rectified Spirit, sufficient to make a mass. The paste is spread on the part to be cauterized, and is allowed to remain for ten or fifteen minutes, while the surrounding skin is protected by adhesive plaster.

Potassa cum Calce in cylinders of three different sizes, consisting of two parts of Potassa and 1 of Lime, were introduced by Dr. Henry Bennet, and are a suitable form for the use of obstetricians.

U.S. Potassa and Lime, equal weights, rubbed together into a powder.

PASTA CAUSTICA, Russ.—Potassa 3, Lime 1.

POTASSA SULPHURATA.

SULPHURATED POTASH.

Syn.—HEPAR SULPHURIS.

Solid greenish masses, liver-brown when recently broken, alkaline and acrid to the taste.

Tests.—Soluble 1 in 2 of Water; not less than 50 per cent. of it is soluble in Rectified Spirit. It forms with Water a yellow solution, which has the odour of Sulphuretted Hydrogen, and evolves it freely when excess of Hydrochloric Acid is dropped into it. The acid fluid when boiled and filtered is precipitated yellow by Perchloride of Platinum, and white by Chloride of Barium.

Medicinal Properties.

Irritant, narcotic, and antiseptic. A good remedy, both internally and externally, for scabies; used also for other chronic eruptions, especially lepra and psoriasis.

(In all the Pharmacopœias; U.S.; Belg. Sulphuretum Potassii Officiale: Dan. Hepar Sulphuris; Fr. Sulfure de Potassium Solide; Austr. Ger. and Russ. Kalium Sulphuratum.)

Dose.—3 to 8 grs.

Preparations.

UNGUENTUM POTASSÆ SULPHURATÆ. Greenish. [ALTERED.]

Sulphurated Potash, 30 grs.; Hard Paraffin, ¼ oz.; Soft Paraffin, ¾ oz.: triturate the Sulphurated Potash in a glass or porcelain mortar and gradually add the melted mixture of the Paraffins, and rub together until the ointment is perfectly smooth and free from grittiness: mix. =(1 in 15½).

Now made with the Paraffins in place of Lard.

Not Official.

BALNEUM SULPHURETUM.—Sulphurated Potash, 4 oz.; Water, 30 galls.: dissolve. This is not quite so agreeable as the Baréges waters, which may be made artificially as follows:—Sulphuret of Sodium, Carbonate of Sodium, and Chloride of Sodium, of each 20 grains to one gallon. But a much stronger solution is often used.

POTASSII ACETAS.

ACETATE OF POTASSIUM.

$KC_2H_3O_2$, eq. 98.

White, foliaceous, satiny masses, very deliquescent.

Solubility: 2 in 1 of Water; 1 in 1 of Proof Spirit; 1 in 2 of Rectified Spirit (it is almost but not entirely soluble in Rectified Spirit).

Tests.—Neutral to test-paper. Its aqueous solution is unaffected by Sulphide of Ammonium, gives a crystalline precipitate with Tartaric Acid, disengages Acetic Acid on the addition of Sulphuric Acid, and strikes a deep red colour with a diluted solution of Perchloride of Iron.

Medicinal Properties.

Advantageously used as a purgative and diuretic in dropsy. It allays sickness in pregnancy, and quiets irritation of the gastric and mucous membrane. It has been used with great success in acute rheumatism.

Best administered in simple solution, with a little Sugar if desired.

Dose.—10 to 20 grs. as a diuretic; 120 to 180 grs. as a laxative.

(In all the Pharmacopœias except Austr., which contains a *solution*, sp. g. 1·200; Russ. have also a solution, sp. g. 1·176—1·180.)

Not Official.

POTASSII BENZOAS.

Solubility, 1 in 1½ of Water; 1 in 18 of Rectified Spirit.

Useful in cystitis with Lithic Acid diathesis.

Dose.—15 to 20 grs.

POTASSII BICARBONAS.

BICARBONATE OF POTASSSIUM.

$KHCO_3$, eq. 100.

In colourless, right rhombic prisms, not deliquescent, of a saline, feebly alkaline taste.

Solubility, 1 in 3·2 of Water. Insoluble in Rectified Spirit.

Tests.—50 grains, exposed to a low red heat, leave 34½ grains of a white residue (Carbonate of Potassium), which requires for exact saturation 500 grain-measures of the volumetric solution of Oxalic Acid. It effervesces on the addition of diluted Hydrochloric Acid, forming a solution which gives a yellow precipitate with Perchloride of Platinum.

Medicinal Properties.

Antacid, antilithic, and diuretic. A powerful alterative, from its rendering the blood and urine strongly alkaline. Used in dyspepsia as an antacid, and in urinary affections where there is a deposition of Uric Acid. Highly useful in acute rheumatism in large and frequent doses.

20 grains is prescribed in effervescence with 15 grs. of Citric Acid.

Closely resembles the Carbonate, but without its irritant qualities.

Administered in aërated water or plain bitter infusion.

Brockedon's compressed pills of Bicarbonate of Potassium are convenient.

Does not excite the liver, unless it be given in large doses.—Dr Rutherford.

Dose.—10 to 20 grs. as an antacid or antilithic; 60 grs. as a diuretic. In acute rheumatism, 30 to 40 grs. every four hours, freely diluted.

(Same as Belg. Fr. and U.S.; Ger, and Russ. Kali Bicarbonicum; Dan Bicarbonas Kalicus; not in Austr.)

Preparation.

LIQUOR POTASSÆ EFFERVESCENS. *Syn.* POTASH WATER. Colourless.

Bicarbonate of Potassium, 30 grs.; Water, 20 oz.: dissolve, and filter the solution, then force into it as much pure washed Carbonic Acid gas (obtained by the action of Sulphuric Acid on Chalk) as can be introduced with a pressure of about four atmospheres, bottle it, and secure the corks with wires.

Dose.—5 to 10 oz.

POTASSII BICHROMAS.

BICHROMATE OF POTASSIUM.

K_2CrO_4, CrO_3, eq. 295.

Used to produce Chromic Acid and Valerianate of Sodium.

Solubility: 1 in 10 of Water; 5 in 6 of boiling Water.

POTASSII BROMIDUM.

BROMIDE OF POTASSIUM.

KBr, eq. 119.

In colourless cubical crystals, odourless, of a pungent saline taste.

Solubility, 10 in 17 of Water; 1 in 1 of boiling Water; 1 in 95 of Rectified Spirit; 1 in 17 of boiling Rectified Spirit.

Tests.—10 grains require for complete decomposition not less than 838 nor more than 850 grain-measures of the volumetric solution of Nitrate of Silver. A solution of this salt, mixed with mucilage of Starch, and *a drop* of aqueous solution of Bromine or Chlorine, does not exhibit any blue colour—indicating absence of Iodide.

When its solution in water is mixed with a little Chlorine, Chloroform agitated with it, on falling to the bottom, exhibits a red colour.

Medicinal Properties.

Introduced for chronic enlargements of the liver. It is employed in enlargement of the spleen, and in bronchocele and scrofula. It exerts a powerful influence on the generative organs, lowering their functions in a marked degree. Useful in mania and nymphomania. All writers on epilepsy agree that the bromides are most valuable in that malady; their efficacy is, therefore, well attested. Relieves spasmodic asthma, both in children and adults. Useful in headache and overworked brain; also in low state of typhus, in combination with ⅓ gr. Sulphate of Morphine every three hours. This salt, as well as the Bromide of Ammonium, is used to produce anæsthesia of the larynx.

Dose.—20 to 60 grains in the twenty-four hours.

(U.S.; Austr. Ger. and Russ. Kalium Bromatum; Dan. Brometum Kalicum; Fr. Bromure de Potassium; Belg. Bromuretum Potassii.)

After long experience of its use, there remains no doubt that its efficacy in keeping off attacks of epilepsy for years is beyond dispute.

Hydrate of Chloral combined with 10 grs. of Bromide of Potassium. Good in mental affections.

Simple syrup covers the taste; Bromide of Sodium is, however, by far the more agreeable to the palate.

INCOMPATIBLES.—Acids, Acidulous Salts, Metallic Salts.

Not Official.

PESSARY.—Bromide of Potassium 10 grs.; Oil of Theobroma sufficient to make one pessary.

POTASSII CARBONAS.

CARBONATE OF POTASSIUM.

Syn. SUBCARBONATE OF POTASH, SALT OF TARTAR, SALT OF WORMWOOD.

Carbonate of Potassium, $\mathbf{K_2CO_3}$, eq. 138 (with about 16 per cent. of Water of Crystallization).

A white crystalline powder, alkaline and caustic, very deliquescent. Solubility, 100 in 75 of Water. Insoluble in Spirit.

Tests.—Loses about 16 per cent. of its weight when exposed to a red heat. When supersaturated with Nitric Acid and evaporated to dryness, the residue is almost entirely soluble in Water, only a little Silica remaining undissolved. This solution is precipitated only faintly by Chloride of Barium and Nitrate of Silver (traces of Sulphates and Chlorides). 83 grains require for neutralization at least 980 grain-measures of the volumetric solution of Oxalic Acid.

Medicinal Properties.

Antacid, antilithic, and diuretic. It is less corrosive than Caustic Potash. Like the bicarbonate, it is diuretic, but inferior to the other salts of Potassium—the nitrate, acetate, and bitartrate. As an antilithic it is preferable to the bicarbonate, and if the tendency to lithic discharge be great, about 35 grains, in divided doses, may be given daily. Sometimes a solution is used as an antilithic injection.

Dose.—10 to 30 grs.

(In all the Pharmacopœias. Austr. and Russ. Kalium Carbonicum depuratum; Belg. and Ger. Kalium Carbonicum; Dan. Carbonas Kalicus; Fr. Carbonate de Potasse Pur; U.S. Potassii Carbonas.)

Contained in Decoctum Aloes Compositum, Enema Aloes, Liquor Arsenicalis, Mistura Ferri Composita.

POTASSII CHLORAS.

CHLORATE OF POTASSIUM.

$KClO_3$, eq. 122·5.

In colourless, inodorous, rhomboidal, crystalline plates, with a cool saline taste. (This Salt ought not to have an odour of Chlorine.)

Solubility, 1 in 16 of cold Water; 1 in 2 of boiling Water.

Tests.—Its solution is not affected by Nitrate of Silver or Oxalate of Ammonium—absence of Chlorides and Calcium. By heat it fuses and gives off an abundance of oxygen gas. Explodes when rubbed in a mortar with Sulphur or a Sulphide.

Medicinal Properties.

Stimulant and diuretic, and appears to undergo no change in passing to the kidneys. Useful when the powers of the system require to be roused, as in the low stage of typhus fever, and particularly, for the same purpose, in small-pox and scarlatina. A strong solution, made with hot water, is the best wash for the mouth when the gums are spongy and irritable; it relieves the tenderness and induces a firmness of the gums; it is also an excellent gargle in diphtheria. A solution of ½ drm. in 4 oz. water, injected into the bladder daily, is a remedy for vesical catarrh. The powder applied to aphthæ in the mouth at once relieves.

(Austr. Ger. and Russ. Kali Chloricum; Belg. Chloras Potassæ; Dan. Chloras Kalicus; Fr. Chlorate de Potasse; U.S.)

Dose.—10 to 20 grs. in water three or four times daily.

7 drms. taken by mistake caused death.—*Lancet*, Feb. 8, 1879.

Preparations.

TROCHISCI POTASSII CHLORATIS. White, inodorous; pure saline taste.

Made with Chlorate of Potassium, Sugar, and Gum Acacia.

Each lozenge contains 5 grs. of Chlorate of Potassium.

Dose.—1 to 6 lozenges.

Lozenges are also made with fruit paste.

(Fr. Tablettes, containing 1½ grs. in each lozenge.)

Not Official.

GARGARISMA.—Chlorate of Potassium, 1 drm.; Honey, ½ oz.; water to 8 oz.

POTASSII CITRAS.

CITRATE OF POTASSIUM.

$K_3C_6H_5O_7$, eq. 306.

A white powder, of saline, feebly acid taste, and deliquescent.

Solubility: 10 in 6 of Water, 1 in 2 of Glycerine, 1 in 9 of Proof Spirit, but if more is dissolved the Spirit separates from the Water.

Tests.—Its aqueous solution mixed with solution of Chloride of Calcium remains nearly clear till it is boiled, when a white precipitate separates, readily and almost entirely soluble in Acetic Acid. 102 grains, heated to redness till gases cease to be evolved, leaves an alkaline residue (Carbonate), which requires for exact neutralization 1000 grain-measures of the volumetric solution of Oxalic Acid.

Medicinal Properties.

A refrigerant diaphoretic and mild alkaline laxative. Useful in gout and rheumatism. It is a valuable saline febrifuge, increasing the secretion of the kidneys, and is thus eliminated in the urine, rendering it neutral or alkaline. Given in cases of uric acid gravel; also as a drink in scurvy.

(U.S.; not in the others. Russ. have Liquor Kali Citrici.)

Dose.—20 to 60 grs. in water.

POTASSII CYANIDUM.

CYANIDE OF POTASSIUM.

KCN, eq. 65.

[NEW.]

May be obtained by heating Ferrocyanide of Potassium at a red heat until gas ceases to be evolved, allowing the sediment to subside in the still molten mass, and pouring off the clear fluid. It may be purified if necessary by solution in and crystallization from spirit. White opaque deliquescent crystalline masses.

Now included in B. P.; was a Not Official in Companion 1871.

Soluble 1 in 2½ of water; almost entirely 1 in 100 of Rectified Spirit.

Tests.—Its aqueous solution has an alkaline reaction, it gives no precipitate with Ferrocyanide of Potassium (absence of Iron). The alcoholic solution gives no precipitate with Chloride of Barium (absence of Sulphate). 10 grains dissolved in 1 oz. of Distilled Water requires about 730 grain-measures of volumetric solution of Nitrate of Silver to be added before a permanent precipitate begins to form.

It contains about 95 per cent. of real Cyanide of Potassium.

(Belg. Fr. and U.S.; not in Austr. Dan. Ger. or Russ.)

Used in the purification of Bismuth, and occasionally employed to produce Hydrocyanic Acid.

Dissolve 20 grains of the Cyanide in 6 drachms of Distilled Water. Dissolve 50 grains Crystallized Tartaric Acid in 3 drachms of Rectified Spirit: mix the solutions. Bitartrate of Potassium is precipitated, and the solution contains 1 grain of Hydrocyanic Acid in every fluid drachm.

It is useful to remove the black stains on the skin caused by Nitrate of Silver.

Entomologists use it with gypsum to make poison bottles for killing insects without injuring the plumage or delicate structure; for this purpose 1 of the Cyanide, 2 of Plaster of Paris, and 1½ of Water, stirred together and poured whilst liquid into a wide-mouthed bottle, forms a hard floor, which is constantly giving off vapour.

POTASSII FERROCYANIDUM.

FERROCYANIDE OF POTASSIUM.

Syn. YELLOW PRUSSIATE OF POTASH.

$K_4FeC_6N_6, 3H_2O$, eq. 422.

[NEW.]

A salt obtained by fusing animal substances, such as cuttings of horns, hoofs, and skins, with Carbonate of Potassium and Iron, in an iron pot, lixiviating the crude product with Water, and purifying the salt by crystallization.

Now included in B.P.; was a Not Official in Companion 1867.

Large yellow crystals.

Soluble 1 in 4 of water; insoluble in Rectified Spirit.

Tests.—Its aqueous solution precipitates deep blue with Persulphate of Iron, brick-red with Sulphate of Copper, and white with Acetate of Lead.

(Belg. Fr. Russ. and U.S.; not in Austr. Dan. or Ger.)

Medicinal Properties.

Useful in nervous and atonic digestion, sick headache, irregular bowels, and want of firmness of flesh.

Dose.—2 grains three times a day.

Used in the preparation of diluted Hydrocyanic Acid and Cyanide of Potassium.

POTASSII IODIDUM.

IODIDE OF POTASSIUM.

KI, eq. 166.

In colourless, generally opaque, cubical crystals.

Solubility, 4 in 3 of Water; 1 in 10 of Rectified Spirit; 1 in 3 of Glycerine.

Tests.—The addition of Tartaric Acid and Mucilage of Starch to its watery solution does not develop a blue colour—absence of Iodate. Solution of Nitrate of Silver added in excess forms a yellow-white precipitate (Iodide of Silver), which, when agitated with Ammonia, yields by subsidence a clear liquid, in which excess of Nitric Acid causes very little turbidity—absence of Chlorine. Its aqueous solution is only faintly precipitated by the addition of saccharated Solution of Lime—only a trace of Carbonates. 10 grains requires for complete precipitation about 602 grain-measures of the volumetric solution of Nitrate of Silver.

Medicinal Properties.

It is useful in cases where Iodine is indicated, and being less irritating is much preferred for internal administration. May be given with Quinine dissolved by Sulphuric Acid or Phosphoric Acid, but not with Nitro-hydrochloric; the eliminated Chlorine decomposes it, and makes an unsightly mixture. Useful in internal metritus and leucorrhœa. For secondary symptoms 60 grains in solution may be given in the twenty-four hours. Combined with Nux Vomica the system bears it better. It is useful in the elimination of Lead from the system in cases of Lead poisoning.

Has no notable effect on biliary secretion.—Dr. Rutherford.

Does.—2 to 10 grs., increasing the dose. 20 grs. have been given three times a day.

(Austr. Belg. Dan. Ger. and Russ. Kalium Iodatum; Fr. Iodure de Potassium; U.S.)

Incompatibles.—Sweet Spirit of Nitre, Subnitrate of Bismuth, Decoction of Liquorice, any vegetable preparation containing Starch; any acid preparations.

It is sometimes prescribed with Tincture of Bark, an ounce of which dissolves 30 grains.

Contained in Linimentum Iodi, Liquor Iodi, Tinctura Iodi, Unguentum Iodi.

Preparations.

LINIMENTUM POTASSII IODIDI CUM SAPONE. [ALTERED.]

Curd Soap, cut small, 2: Iodide of Potassium, 1½; Glycerine, 1; Oil of Lemon, ⅛; Distilled Water, 10: reduce the soap to fine shreds, and dissolve this in the Water and Glycerine in a porcelain dish over a water bath; then pour it into a mortar in which the Iodide of Potassium has been previously powdered. Mix briskly and continue the trituration until the mixture is cold: set aside for an hour, then rub well the Oil of Lemon into the cream-like product.

The advantages of this liniment are that it does not stain, nor does it irritate when rubbed on the skin; it is employed in enlargement of the joints, indurated glands, especially the cervical glands.

The additions to the Brit. Pharm. 1874 stated that this Liniment may with advantage (?) be made with curd soap.—It makes a much stiffer liniment, and looks very opaque; patients will hardly believe it is the same liniment (*see below.*)

UNGUENTUM POTASSII IODIDI. White. [MODIFIED.]

Iodide of Potassium, 64 grs.; Carbonate of Potassium, 4 grs.; Distilled Water, 1 drm.; Benzoated Lard, 1 oz.: dissolve the Carbonate and the Iodide in the Water, and mix thoroughly with the Lard. =(1 in 8¾).

Now made with Benzoated Lard in the place of Lard.

(U.S. 1 in 8½; Austr. and Fr. 1 in 10; Ger. 1 in 10 with Paraffin Ointment; Russ. 1 in 10 with Hyposulphite of Sodium; Dan. with Glycerinum Amyli, 1 in 10.)

Note.—The Carbonate is introduced in order to prevent the ointment turning yellow.

Not Official.

Linimentum Potassii Iodidi c. Sapone B. P. 1867. Hard Soap, cut small, 1½; Iodide of Potassium, 1½; Glycerine, 1; Oil of Lemon, ⅛; Water, 10.

"Put the Glycerine, Iodide, and 3 oz. Water into a clean 20-oz. wide-mouth bottle; then dissolve the soap (finely shaved) in the 7 oz. of Water in a jar by the heat of a water bath; strain the solution whilst hot through muslin into the bottle containing the Iodide, etc.; allow to stand for two or three minutes, until the bottom of the soap solution is a little opaque, then mix by agitation; lastly add the Ess. Limonis, shaking briskly, and, after agitating at intervals for two hours or more, a liniment in the form of a soft white jelly will result, and remain so; if it should not, a small addition of water (½ oz.) will generally perfect it."

We have given this formula, which is nearly the same as B. P. 1867, as it has been in use for nearly twenty years, and when made properly gives satisfaction. It forms a semi-opaque jelly.

Pessary.—Iodide of Potassium, 10 grs.; Oil of Theobroma sufficient to make one pessary.

POTASSII NITRAS.

NITRATE OF POTASSIUM.

Syn. NITRE, SALTPETRE.

KNO_3, eq. 101.

Nitrate of Potassium of commerce, purified if necessary by crystallization from Solution in Distilled Water. In white opaque masses or fragments of striated, six-sided prisms, colourless, of a peculiar cool saline taste.

Solubility, 1 in 4 of cold water; 2½ in 1 of boiling water; sparingly in Rectified Spirit.

Test.—Its solution is not affected by Chloride of Barium or Nitrate of Silver—indicating absence of Sulphates and Chlorides.

Medicinal Properties.

Refrigerant, diuretic, diaphoretic, and sedative. Useful as a gargle in inflammatory sore throat. It reduces the pulse, and is much used in acute inflammatory diseases: with Tartar Emetic and Calomel it promotes the secretions of the liver and skin. Nitrate of Potassium, 5 grs.; Bicarbonate of Potassium, 20 grs.; taken, during effervescence, with Citric Acid, 15 grs., in a small tumbler of cold water, is a pleasant cooling draught, and very effectual in lessening febrile excitement.

(In all the Pharmacopœias. Austr. Belg. and Ger. Kalium Nitricum; Dan. Nitras Kalicus; Fr. Azotate de Potasse; Russ. Kali Nitricum depuratum; U.S. Potassii Nitras.)

Dose.—5 to 20 grs. as a refrigerant and diuretic; 20 to 30 grs. as a vascular sedative.

Not Official.

CHARTA NITRATA.—Belg. Fr. Ger. Russ. and U.S.—Soak porous paper in a saturated solution of Nitre, dry it, roll it up, and burn in a candlestick. Used in asthma.

GARGARISMA.—Nitre, ¼ oz.; Oxymel, 1 oz.: Barley Water, 7 oz.

FOR SPRAY.—Nitre, 15 grs.; Water 1 oz.

POTASSII PERMANGANAS.

PERMANGANATE OF POTASSIUM.

$KMnO_4$, eq. 158.

In dark purple, slender, prismatic crystals, inodorous, with a sweet astringent taste.

Solubility, 1 in 18 of Water; 1 in 3 of boiling Water.

Tests.—Entirely soluble in cold Water, producing a rich purple colour. 5 grains dissolved in Water require, for complete decoloration, a solution of 44 grains of granulated Sulphate of Iron acidulated with 2 fluid drachms of diluted Sulphuric Acid.

Medicinal Properties.

A powerful antiseptic. Given also in diabetes. Externally, as a caustic and deodorizer, to foul ulcers and cancers. Corrects offensive evacuations. Useful in ozæna; it corrected fœtid expectorations when carbolic acid failed.

Dose.—1 to 2 grs. three times daily in water, or in pill with Kaolin Ointment.

(U.S.; Fr.; Austr. and Russ. Kali Hypermanganicum crystallisatum; Dan. Hypermanganas Kalicus; Ger. Kali Permanganicum; not in Belg.)

Preparation.

LIQUOR POTASSII PERMANGANATIS. Intense purple.

Permanganate of Potassium, 88 grs.; Distilled Water, 20 oz.: dissolve. =(about 1 in 100).

If this needs filtration, Pyroxylin is best for the purpose.

(Half the strength of Condy's Fluid.)

Diluted with 40 parts water, it is useful as a gargle or as a cleansing wash for diseased surfaces.

Dose.—2 to 4 drms.

(U.S. about same as Brit.; not in the others.)

INCOMPATIBLES.—Ought never to be put in corked bottles, as it soon becomes decomposed when in contact with any organic substance, animal or vegetable.

POTASSII SULPHAS.

SULPHATE OF POTASSIUM.

K_2SO_4, eq. 174.

In colourless, hard, six-sided prisms, terminated by six-sided pyramids.

Solubility, 1 in 10 of cold Water, 1 in 4 of boiling Water. Insoluble in Rectified Spirit.

Test.—Its solution is neutral to test-paper, and is not affected by Oxalate of Ammonium—indicating absence of Calcium.

Medicinal Properties.

Mildly cathartic, usually operating without irritation. Generally given in combination with Rhubarb. A useful purgative in jaundice and dyspeptic affections.

Is an hepatic and intestinal stimulant of considerable power. Its action on the liver is, however, uncertain, probably owing to its sparing solubility.—Dr. Rutherford.

Dose.—10 to 20 grs. as an alterative; 60 grs. as a purgative.

(U.S.; Fr. Sulfate de Potasse; Austr. Belg. Sulphas Potassæ; Ger. Kalium Sulphuricum; Russ. Kali Sulphuricum; Dan. Sulphas Kalicus.)

Contained in Pilula Colocynthidis Composita and Pulvis Ipecacuanhæ Compositus.

Sulphate of Potassium was long known as Sal Polychrestum, and the Bisulphate (the residue from making Nitric Acid) is called Sal Enixum.

Not Official.

POTASSII SULPHIS.—A Salt obtained by saturating a solution of Carbonate of Potassium with Sulphurous Acid Gas, and crystallizing it. Solubility, 1 in 3 of water. Dose, 10 grs. in Pyæmia.

POTASSII TARTRAS.

TARTRATE OF POTASSIUM.

Syn. SOLUBLE TARTAR.

$K_2C_4H_4O_6$, H_2O, eq. 244.

In small, colourless, four or six-sided prisms.

Solubility, 10 in 6 of Water. Insoluble in Rectified Spirit.

Tests.—Entirely dissolved by its own weight of Water. 122 grains, heated to redness till gases cease to be evolved, leaves an alkaline residue (Carbonate), which requires for exact neutralization 990 grain-measures of the volumetric Solution of Oxalic Acid.

Medicinal Properties.

A mild, cooling purgative, operating, like most of the neutral salts, without much pain, and producing watery stools. In smaller doses, diuretic and alterative.

Dose.—As a diuretic and alterative, 20 to 60 grs.; as a purgative, 120 to 200 grs.

(U.S.; Fr. Tartrate de Potasse Neutre; Austr. Belg. Tartras Potassæ; Ger. Kalium Tartaricum; Russ. Kali Tartaricum; Dan. Tartras Kalicus.)

POTASSII TARTRAS ACIDA.

ACID TARTRATE OF POTASSIUM.

Syn. Potassæ Bitartras; Cream of Tartar.

$KHC_4H_4O_6$, eq. 188.

An acid salt obtained from the crude Tartar which is deposited during the fermentation of grape juice and from the lees of wine.

A fine gritty white powder, or fragments of cakes crystallized on one surface, of a pleasant acid taste.

Solubility, 1 in 200 of cold Water, 1 in 16 of boiling Water. Insoluble in Rectified Spirit.

Tests.—204 grains, heated to redness till gases cease to be evolved, leave an alkaline residue (Carbonate), which requires for exact neutralization at least 1000 grain-measures of the volumetric solution of Oxalic Acid. When incinerated it leaves a black residue, which, when dissolved in diluted Hydrochloric Acid and filtered and then neutralized by Ammonia, is usually rendered somewhat turbid by Oxalic Acid.

Some samples contain Tartrate of Calcium and Sulphate of Barium.—*Ph. Jl.* (3) Vol. viii. pp. 350, 467, 595.

Medicinal Properties.

Cathartic, diuretic, and refrigerant. Much used in febrile and dropsical affections.

Dose.—As a refrigerant or diuretic, 20 to 60 grs.; as an aperient, 60 to 120 grs.; as a hydragogue cathartic, ½ to 1 oz.

(In all the Pharmacopœias. Austr. Kalium hydro-tartaricum; Belg. Bitartras Potassæ depuratus; Dan. Bitartras Kalicus; Fr. Tartrate de Potasse Acide; Ger. Tartarus depuratus; Russ. Kali Bitartarici depuratum; U.S. Potassii Bitartras.)

Contained in Confectio Sulphuris, Pulvis Jalapæ Compositus.

Not Official.

TARTARUS BORAXATUS. TARTRATE BORICO-POTASSIQUE. SOLUBLE CREAM OF TARTAR.

Belg. Bitartrate of Potassium 4, Borax 1, Water 10.
Dan. Bitartrate of Potassium 2, Borax 1, Water 8.
Fr. Bitartrate of Potassium 4, Boric Acid 1, Water 10.
Ger. Bitartrate of Potassium 5, Borax 2, Water 20.
Russ. Bitartrate of Potassium 5, Borax 2, Water 16.

PRUNUM.

PRUNE.

The dried drupe of the plum, *Prunus domestica*.

Imported from the South of France.

Medicinal Properties.

Nutritious and refrigerant. Rarely prescribed, though often used in domestic medicine as a laxative.

(Belg. Pulpa Prunorum; Fr. Prunier Commun; and U.S.; not in the others.)

Contained in Confectio Sennæ.

Not Official.

PRUNI VIRGINIANÆ CORTEX.

WILD CHERRY BARK.

Syrupus.—Bark, 5; Cold Water, 16: infuse 4 hours, then percolate, to make 16; add Sugar, 28, and shake till dissolved.

Tonic and calming, highly useful in debility of stomach with local irritation.

Extremely useful given in full doses for spasmodic cough with irritable throat.

Dose.—2 to 4 drms.

(U.S. Wild Cherry 12, Sugar 60, Glycerine 5, Water to make 100.

PTEROCARPI LIGNUM.

RED SANDAL-WOOD.

Syn.—Red Sanders-Wood.

The sliced or rasped heart-wood of *Pterocarpus santalinus*.

From Ceylon.

Used solely as a colouring agent.

(Belg. and Dan. Lignum Santali Rubrum; Fr. Santal Rouge; U.S. Santalum Rubrum; not in Austr. Ger. or Russ.)

Contained in Tinctura Lavandulæ Comp.

PULVERES.

POWDERS.

The following Powders are contained in the British Pharmacopœia, the formulas of which will be found under the names of the substances from which they are prepared:—

	Proportions of active ingredients in the whole.
PULVIS AMYGDALÆ COMPOSITUS	8 in 13.
PULVIS ANTIMONIALIS	Oxide 1 in 3.
PULVIS CATECHU COMPOSITUS	1 in 2½.
PULVIS CINNAMOMI COMPOSITUS	1 in 3.
PULVIS CRETÆ AROMATICUS	about 1 in 4.
PULVIS CRETÆ AROMATICUS CUM OPIO	Opium 1 in 40.
PULVIS ELATERINI COMPOSITUS	1 in 40.
PULVIS GLYCYRRHIZÆ COMPOSITUS	Senna 1 in 6.
PULVIS IPECACUANHÆ COMPOSITUS	Opium 1 in 10.
PULVIS JALAPÆ COMPOSITUS	1 in 3.
PULVIS KINO COMPOSITUS	Opium 1 in 20.
PULVIS OPII COMPOSITUS	Opium 1 in 10.
PULVIS RHEI COMPOSITUS	1 in 4½.
PULVIS SCAMMONII COMPOSITUS	1 in 2.
PULVIS TRAGACANTHÆ COMPOSITUS.	

PYRETHRI RADIX.

PELLITORY ROOT.

The root of *Anacyclus Pyrethrum*.
Imported from the Levant.

Medicinal Properties.

It is powerfully stimulant to the salivary glands, causing a copious flow of saliva, and, on that account, is so effective in relieving toothache; it has also been useful in paralysis of the tongue.

(Austr. Belg. Fr. (Pyrethre Officinal), and U.S. same as Brit.; Dan. and Russ. use the root of *Anacyclus officinarum*; not in Ger.)

Preparation.

TINCTURA PYRETHRI. Light brown.

Pellitory Root, in No. 40 Powder, 4; Rectified Spirit, 20: macerate for forty-eight hours with fifteen of the spirit, agitating occasionally, then pack in a percolator, let it drain, and pour on the remaining spirit; when it ceases to drop, press, filter, and make up with Rectified Spirit to 20. =(1 in 5).

Chiefly used alone or in mixture for relieving toothache.

(Belg. Dan. Fr. and Russ. 1 and 5; by weight; not in the others.)

Not Official.

PYRETHRUM ROSEUM.

The powder of the flower-heads, called "Insect Powder." Keeps away fleas; it also drives away ants if placed in their track.

Not Official.

PYRIDIN.

C_5H_5N, eq. 79.

A colourless volatile liquid alkaloid obtained from the products of the destructive distillation of bones.

It has a powerful and a peculiar odour.

It yields a deliquescent salt with Hydrochloric Acid.

Medicinal Properties.

Useful in the treatment of Asthma; 4 or 5 grammes (60 to 77 grains) are allowed to evaporate from a flat dish in a small room, the patient being exposed to its vapour for 1½ hours three times a day.—*B. M. J.*, Dec., 1885, p. 1074.

PYROXYLIN.

GUN COTTON.

Cotton Wool, 1; Sulphuric Acid, 5; Nitric Acid, 5: mix the Acids, immerse the Cotton, and stir with a glass rod for three minutes, or until it is thoroughly wetted; then remove it, and thoroughly wash out the acid, so that the washings cease to precipitate with Chloride of Barium. Drain on filtering-paper, and dry in a water bath.

Tests.—Readily soluble in a mixture of Ether and Rectified Spirit. Leaves no residue when exploded by heat.

PREPARATIONS.—Collodium, Collodium Flexile, Collodium Vesicans.

Dan. Cotton 1, Crude Nitric Acid (sp. g. 1·382—1·390) 8, Crude Sulphuric Acid (sp. g. 1·833) 20.

Belg. Pyroxylum, no formula given.

Fr. Fulmicoton. Cotton Wool 11, Nitric Acid 100, Sulphuric Acid 200.

Ger. Pyroxylin. Purified Cotton 55, Crude Nitric Acid (sp. g. 1·380) 400, Crude Sulphuric Acid (sp. g. 1·830) 1000.

Russ. Cotton 1, Crude Nitric Acid (sp. g. 1·382—1·390) 9, Crude Sulphuric Acid (sp. g. 1·833) 18.

U.S. Pyroxylinum. Cotton 1, Nitric Acid 10, Sulphuric Acid 12.

All by weight. Not in Austr.

QUASSIÆ LIGNUM.

QUASSIA WOOD.

The wood of *Picræna excelsa*, in raspings, shavings, or chips. From Jamaica.

Medicinal Properties.

Possesses in a high degree the properties of the simple bitters, without astringency. Tonic. Particularly adapted to dyspepsia and in the debility which succeeds acute disease, also as a tonic in intermittents.

A few chips of Quassia or a weak infusion used in the morning bath is a protection against the annoying insects found in our cornfields.—*Lancet*, August, 1884, p. 306.

(U.S. same as Brit.; Austr. Belg. Dan. Ger. and Russ. use *Quassia Amara;* Fr. use both.)

Preparations.

EXTRACTUM QUASSIÆ. Black.

Quassia Wood, rasped, 1 lb.; Distilled Water, a sufficiency: macerate the Quassia in 8 oz. of water for twelve hours, pack in a percolator, add water till the Quassia is exhausted; evaporate the liquor, filter before it becomes too thick, again evaporate by a water bath to a proper consistence for forming pills.

48 oz. of wood yield 1 oz. of extract.

Dose.—3 to 5 grs.

(In all the Pharmacopœias; Fr. from Quassia Amara; Ger. use boiling Water; U.S. with cold Water and Glycerine, also fluid extract.)

INFUSUM QUASSIÆ.

Quassia Wood, in chips, 55 grs.; cold Distilled Water, 10 oz.: infuse half an hour, and strain. =(about 1 in 80.)

Dose.—1 to 2 oz.

(Fr. 1 in 200 Quassia Amara; not in Austr. Belg. Ger. Russ. or U.S.)

A good vehicle for iron preparations.

TINCTURA QUASSIÆ. Straw colour.

Quassia Wood, in chips, ¾; Proof Spirit, 20: digest seven days, agitating occasionally, filter, and make up with Proof Spirit to 20. =(1 in 27.)

Dose.—1 to 2 drms.

(Belg. 1 in 5; Dan. and Fr. 1 and 5; U.S. 1 in 10; all by weight; not in Austr. Ger. or Russ.)

Not Official.

QUEBRACHO.

The bark of *Aspidosperma Quebracho*, obtained from Chili (*Quebracho blanco.*) It is said to possess tonic, febrifuge, and anti-asthmatic properties.

An alkaloid (or mixture of alkaloids) called Aspidospermine has been obtained from it, the Hydrochlorate of which is readily soluble in Water.

QUERCUS CORTEX.

OAK BARK.

The dried bark of the small branches and young stems of *Quercus Robur*, collected in spring from trees growing in Britain.

Medicinal Properties.

A valuable astringent, whether administered internally or applied externally. May be used either generally or topically, in all cases requiring astringents, such as tenderness of the gums; in leucorrhœa, prolapsus, &c.

Dose.—Of the powder, 30 to 120 grs.

(In all the Pharmacopœias; U.S. Quercus alba.)

Preparation.

DECOCTUM QUERCUS.

Oak Bark, bruised, 1½; Distilled Water, 20: boil ten minutes in a covered vessel, and strain; wash the marc with water to make 20. =(1 in 16).

Dose.—1 to 2 oz. two or three times daily.

(Russ. Dec. Quercus Aluminatum; not in the others.)

Incompatibles.—Mineral Acids, Alkalies, Metallic Salts, Gelatine, Alkaloids.

Not Official.

* QUILLAYA SAPONARIA.

The inner bark of the tree; called Soap Bark; it imparts a soapy character to cold water when macerated in it, and is much valued as a wash to cleanse the hair.

Tinctura.—Bark, 1; Proof Spirit, 5; by percolation. Mixed with water, forms a nice wash for the hair.

QUININÆ HYDROCHLORAS.

HYDROCHLORATE OF QUININE.

$C_{20}H_{24}N_2O_2HCl, 2H_2O$, eq. 476·5.

[NEW.]

Obtained from the same sources and by the same process as Sulphate of Quinine, the separated alkaloid being neutralized by Hydrochloric Acid.

Soluble, 1 in 24 of Water; 1 in 1 of boiling Water; 1 in 1 of Rectified Spirit; 1 in 1 of Proof Spirit; very soluble in Chloroform.

Tests.—Its solution gives with Nitrate of Silver a white precipitate insoluble in Nitric Acid; with Chloride of Barium it gives only a faint turbidity—trace of Sulphate. It may be converted into Sulphate of Quinine by dissolving it together with an equal weight of Sulphate of Sodium in ten times its weight of hot Distilled Water, and setting the mixture aside at 60° F. (15·5° C.) for half an hour. Such Sulphate should respond to the tests mentioned under Quininæ Sulphas.

(Austr. and Ger. Chininum Hydrochloricum; Dan. Chloretum Chinicum; Fr. Chlorohydrate de Quinine Basique; Russ. Chininum Hydrochloratum; U.S.; not in Belg.)

Medicinal Properties.

Same as Sulphate of Quinine. This salt is very much more soluble than the Sulphate.

Dose.—1 to 10 grs.

Preparation.

TINCTURA QUININÆ. Light brown. [ALTERED.]

Hydrochlorate of Quinine, 480 grs.; Tincture of Orange Peel, 60 oz.: dissolve with a gentle heat, digest for three days with occasional agitation, and filter. =(1 grain in 60 minims).

It is now made with Hydrochlorate of Quinine in place of Sulphate.

Dose.—1 to $1\frac{1}{2}$ drms.

QUININÆ SULPHAS.

SULPHATE OF QUININE.

$((C_{20}H_{24}N_2O_2)_2H_2SO_4)_2 15H_2O$, eq. 1762.

The sulphate of an alkaloid prepared from the powder of various kinds of Cinchona and Remijia Bark by extraction with Spirit after the addition of Lime, or by the action of alkali on an acidulated aqueous infusion, with subsequent neutralization of the alkaloid by Sulphuric Acid, and purification of the resulting salt.

(Quinine was discovered by Pelletier and Caventou in 1820.)

Soluble about 1 in 600 of Water; 1 in 25 of boiling Water; 1 in 65 of Rectified Spirit; 1 in 40 of Glycerine.

60 grs. require 60 minims of diluted Sulphuric Acid or 100 minims. of diluted Phosphoric Acid for solution in 2 oz. of distilled water.

66 grs. require 60 minims of diluted Nitric Acid for solution in 2 oz. of water.

25 grs. of Sulphate of Quinine should lose 3·8 grs. of water by drying at 212° F.

Tests.—Dissolved in pure Sulphuric Acid, has a feeble yellowish tint, and undergoes no further change of colour when gently warmed. Its solutions give with Chloride of Barium a white precipitate insoluble in Nitric Acid, or when treated first with Solution of Chlorine and afterwards with Ammonia they become of an emerald-green colour, and Solution of Ammonia gives with them a white precipitate of Quinine soluble in Ether and in excess of the Solution of Ammonia. Ignited with free access of air, it burns without leaving any residue.

Test for Cinchonidine and Cinchonine.—Heat 100 grs. of the Sulphate of Quinine in 5 or 6 oz. of boiling Water, with 3 or 4 drops of diluted Sulphuric Acid. Set the solution aside until cold. Separate, by filtration, the purified Sulphate of Quinine, which has crystallized out. To the filtrate, which should nearly fill a bottle or flask, add Ether, shaking occasionally, until a distinct layer of Ether remains undissolved. Add Ammonia in very slight excess, and shake thoroughly, so that the Quinine at first precipitated shall be redissolved. Set aside for some hours or during a night. Remove the supernatant clear ethereal fluid, which should occupy the neck of the vessel, by a pipette. Wash the residual aqueous fluid and any separated crystals of alkaloid with a very little more Ether, once or twice. Collect the separated alkaloid on a tared filter, wash it with a little Ether, dry at 212° F.

(100° C.), and weigh. Four parts of such alkaloid correspond to five parts of crystallized Sulphate of Cinchonidine or of Sulphate of Cinchonine.

Test for Quinidine.—Recrystallize 50 grains of the original Sulphate of Quinine as described in the previous paragraph. To the filtrate add Solution of Iodide of Potassium and a little Spirit of Wine to prevent the precipitation of amorphous Hydriodates. Collect any separated Hydriodate of Quinidine, wash with a little Water, dry, and weigh. The weight represents about an equal weight of crystallized Sulphate of Quinidine.

Test for Cupreine.—Shake the recrystallized Sulphate of Quinine, obtained in testing the original Sulphate of Quinine for Cinchonidine and Cinchonine, with 1 fl. oz. of Ether and ¼ oz. of Solution of Ammonia, and to this ethereal solution, separated, add the ethereal fluid and washings also obtained in testing the original sulphate for the two alkaloids just mentioned. Shake this ethereal liquor with a quarter of a fl oz. of a 10 per cent. Solution of Caustic Soda, adding water if any solid matter separates. Remove the ethereal solution. Wash the aqueous solution with more Ether, and remove the ethereal washings. Add diluted Sulphuric Acid to the aqueous fluid heated to boiling, until the soda is exactly neutralized. When cold collect any Sulphate of Cupreine that has crystallized out on a tared filter; dry and weigh.

Sulphate of Quinine should not contain much more than 5 per cent. of sulphates of other Cinchona alkaloids.

Medicinal Properties.

Sulphate of Quinine may be substituted in all cases where Cinchona is applicable, and in the treatment of intermittent fever and ague has almost superseded the bark. Useful in many chronic diseases in which intermissions do not occur, as in chronic and pulmonary catarrh kept up by weakened habit, chronic diarrhœa, scrofulous condition of the system, and every case of direct debility. In neuralgia and in acute lumbago, 2 grains three times a day. 20 grains taken when a fit of epilepsy is coming on will frequently prevent it. For subcutaneous injection, 1 grain neutral Sulphate in 12 minims of water.

The frequent use of Quinine has been known to produce deafness.

When a large dose (say 10 grains) is given, it is best suspended in water; the bitterness is not then so intense as when in solution.

The taste of Quinine is covered if taken in sweetened milk—prescribed in pill, syrup, confection, or Glycerine is best.

In mixtures, Tincture of Orange and sometimes Spirit of Ether are added to prevent it causing headache.

The Infusion of Roses of the Pharmacopœia is a favourite vehicle, but it is always turbid and unsightly: when Pure Quinine is dissolved in the Infusion of Roses with Nitric Acid (*vide* Rosa Gallica) it is bright and attractive in appearance. But if Sulphuric Acid, or even Sulphate of Quinine, is prescribed in this Infusion, it becomes at once turbid.

Dose.—1 to 5 grs. three times daily as a tonic, or in larger doses as an antiperiodic.

It is best made into pills with a mixture of equal parts of liquid Glucose and Treacle.

Contained in Ferri et Quininæ Citras.

INCOMPATIBLES.—All Alkalies and their Carbonates: astringent infusions throw down a Tannate of Quinine, which Sulphuric Acid, instead of dissolving, helps in precipitating. Tinctures do not readily dissolve Quinine; it should be always prescribed in mixtures with a little Nitric Acid, or if preferred in drops, can be made as already directed with either of the Acids, as mentioned above.

If 15 grs. are prescribed with 30 grs. of Carbonate of Ammonium in 6 oz. of water, it solidifies.

(In all the Pharmacopœias; Belg. and U.S. Quininæ Sulphas; Austr. Ger. and Russ. Chininum Sulphuricum; Dan. Sulphas Chinicus.)

Preparations.

TINCTURA QUININÆ AMMONIATA.

Sulphate of Quinine, 160 grs.; Solution of Ammonia, 2½ fl. oz.; Proof Spirit, 17½ oz.: dissolve the Quinine in the Spirit with a gentle heat, and add the Solution of Ammonia. =(1 gr. in 60 minims).

Heat is unnecessary as Sulphate of Quinine is readily soluble in the mixture of Spirit and Ammonia.

Dose.—1 to 2 drms. in a wineglass of water.

When mixed with water the Quinine soon separates, therefore this preparation cannot be prescribed in mixtures.

VINUM QUININÆ. Light brown.

Sulphate of Quinine, 20 grs.; Citric Acid, 30 grs.; Orange Wine, 20 oz.: dissolve first the Citric Acid and then the Sulphate of Quinine in the Wine; digest three days, and filter. =(1 gr. in 480 minims).

Dose.—½ to 1 oz.

Not Official.

Quinina.

(Austr. Russ. and U.S.; not in the others.)

Soluble, very sparingly, in Water; 1 in 1 of Rectified Spirit; 1 in 3 of Chloroform; 1 in 4 of Ether.

Quininæ Arsenias.

Dose, one-tenth grain.

Quininæ Carbolas.

Dose, 2 grs. for Diarrhœa.

Quininæ Citras.

Soluble 1 in 1600 of Water; not soluble in Lemon Juice; slightly in Chloroform.

Quininæ Hypophosphis.

Soluble 1 in 66 of Water; 1 in 40 of Rectified Spirit.

Quininæ Phosphas.

Soluble 1 in 420 of Water; 1 in 110 of Rectified Spirit.

Quininæ Salicylas.

Soluble 1 in 630 of water; 1 in 24 Rectified Spirit; 1 in 25 of Chloroform.

Quininæ Bisulphas, syn. Quininæ Sulphas Neutralis.

(Belg. Fr. Ger. and U.S.)

Soluble 1 in 10 of Water; 1 in 45 of Rectified Spirit.

A solution of 1 or 2 grs. to the ounce of Distilled Water applied to the eyes and nostrils for Hay Fever.

Quininæ Valerianas.

(Belg. Fr. Russ. and U.S.)

Made by decomposing Hydrochlorate of Quinine with Valerianate of Sodium.

Soluble: 1 in 120 of cold Water; 1 in 2 of Rectified Spirit; 1 in 14 of Ether.

Dose.—1 to 3 grs.

Syrupus Quininæ Dikinatis.

Introduced by Dr. Donovan of Dublin.

1 drm. contains 2 grs. of Dikinate of Quinine, which are equal to 3¾ oz. of Decoction of Bark, or 96 grs. of Powdered Bark.

Dose.—½ to 1 drm.

SYRUPUS QUININÆ HYDRIODATIS.

1 grain in each drachm.

An excellent remedy in cases of chronic rheumatism.

Dose.—A teaspoonful three times a day.

WARBURG'S TINCTURE FOR MALARIA FEVER.

Dr. Carl Warburg's contains Quinine. The formula for this is given in the *Medical Times* for Nov. 13th, 1875, with some interesting cases by Professor Maclean, C.B.

QUINETUM.

The mixed Alkaloids from the E. I. Red Bark. The Sulphate resembles Sulphate of Quinine, and is given in the same dose.

Soluble, sparingly, in Water; 1 in 90 of Rectified Spirit.

RESINA.

RESIN.

The residue left after the distillation of the Oil of Turpentine from the crude Oleo-resin (Turpentine) of various species of *Pinus*.

Yellow, translucent.

Soluble in almost all proportions of Rectified Spirit, Ether, and Oil of Turpentine, and in hot Olive Oil.

Medicinal Properties.

Important as an ingredient of ointments, but never used internally.

(In all the Pharmacopœias; U.S. Resina; Belg. and Ger. Colophonium; Fr. Poix-resine; Austr. Dan. and Russ. Resina Pini.)

Contained in Charta Epispastica, Emplastra, and Unguentum Terebinthinæ.

Preparations.

EMPLASTRUM RESINÆ. *Syn.* ADHESIVE PLASTER. Pale yellow. [MODIFIED.]

Resin, in powder, 2; Litharge Plaster, 16; Curd Soap, 1: melt the Plaster with a gentle heat, add the Resin and Soap, first liquefied, and mix. =(1 in 9½).

Now made with Curd Soap in place of Hard Soap.

(Belg. Cera Alba 3, Colophonium 6, Terebinthina Cocta 6, Lead Plaster 85; U.S. Resin 14, Lead Plaster 80, Yellow Wax 6; Dan. (Emplastrum Citrinum), Resin 6, Yellow Wax 4, Suet 2, common Turpentine 1; Ger. Lead Plaster 50, Yellow Wax 5, Dammar Resin 5, Resin 5, Turpentine ½; Russ. (Emplastrum Resinæ Pini), Resin 2, Yellow Wax 4, Suet 1, common Turpentine 1; not in Austr. or Fr.)

Used chiefly for strapping wounds and ulcers.

UNGUENTUM RESINÆ. Dusky yellowish-brown.

Resin, in coarse powder, 4; Yellow Wax, 2; Simple Ointment, 8; Almond Oil, 1: melt with a gentle heat, strain while hot through flannel, and stir till cool. =(1 in 3¾).

(Ung. Basilicum; Dan. Fr. Ger. and Russ. are all different.)

A stimulating dressing for indolent ulcers.

Not Official.

RESORCIN.

$C_6H_4(HO)_2$, eq. 110.

White crystals obtained by the destructive distillation of Brazilin or by fusing Benzoldisulphonate of Potassium with Caustic Potash.

Soluble 4 in 3 of Water; 4 in 3 of Rectified Spirit; 1 in 1 of Glycerine; 1 in 1 of Ether.

Test.—Its aqueous solution becomes deep violet on the addition of Ferric Chloride

Medicinal Properties.

Antiseptic and antipyretic. Has been employed in the treatment of acute rheumatism, ague, and typhoid fever; also as an application in diphtheria. In large doses it produces profuse perspiration, flushing of the face, and giddiness. Dr. Murrell describes a case of poisoning by 2 drms. of it which nearly proved fatal.—*Med. Times and Gaz.*, October, 1881, p. 487.

1½ to 5 grs. dissolved in 2 oz. of Infusion of Chamomile for cholera infantium.—*Med. Record*, 1881, pp. 227, 413.

Dose.—10 to 40 grs.

Antidote.—Good Red Wine, Bordeaux, or Burgundy.—*Ph. Jl.*, Jan., 1885, p. 1067.

RHAMNI FRANGULÆ CORTEX.

FRANGULA BARK.

[NEW.]

The dried bark of *Rhamnus Frangula.*

Collected from the young trunk and moderate-sized branches, and kept at least one year before being used.

Now included in B. P.; was a Not Official in Companion 1877.
(Dan. Ger. Russ. and U.S.; not in Austr. or Belg.)

Medicinal Properties.

A laxative or purgative for delicate constitutions and the aged. It is said to be without irritating properties.

Preparations.

EXTRACTUM RHAMNI FRANGULÆ. [NEW.]

Macerate 16 of Rhamnus Frangula Bark, in No. 40 powder, with 40 of Proof Spirit for forty-eight hours in a closed vessel, pack in a percolator, and when the fluid ceases to pass continue the percolation with Water until 60 have been collected or the Rhamnus is exhausted; evaporate the liquor by a water bath to a suitable consistence.

(Russ. with boiling Water; not in the other Pharmacopœias.)

Dose.—15 to 60 grs.

EXTRACTUM RHAMNI FRANGULÆ LIQUIDUM. [NEW.]

Boil 16 of Rhamnus Frangula Bark in coarse powder, in 3 or 4 successive portions of Distilled Water until exhausted; evaporate the liquors by a water bath to 12; when cold, add 4 of Rectified Spirit, let it stand for some hours, then filter and make up to 16 with Distilled Water.

(U.S. cold Water and Rectified Spirit; not in the other Pharmacopœias.)

Dose.—1 to 4 drms.

RHAMNI PURSHIANI CORTEX.

SACRED BARK.

Syn. Cascara Sagrada.

[NEW.]

The dried bark of *Rhamnus Purshianus.*

Medicinal Properties.

Laxative. Is under favourable conditions a specific in chronic constipation, is especially indicated in cases characterized by torpidity of the liver, and an atonic condition of the stomach and bowels.—*B. M. J.*, July, 1883, p. 68.

Preparations.

EXTRACTUM CASCARÆ SAGRADÆ. [NEW.]

Macerate 16 of Cascara Sagrada, in No. 40 powder, in 40 of Proof Spirit for forty-eight-hours; pack in a percolator, and when the fluid ceases to pass, continue the percolation with Water until 60 of liquid is obtained, or the Cascara is exhausted: evaporate the liquor to a suitable consistence.

Dose.—2 to 8 grs.

EXTRACTUM CASCARÆ SAGRADÆ LIQUIDUM. [NEW.]

Boil Cascara Sagrada in coarse powder, in 3 or 4 successive quantities of Distilled Water until it is exhausted: evaporate the strained liquors by a water bath to 12, and when cold add 4 of Rectified Spirit; let it stand for some hours, then filter and make up to 16 with Distilled Water.

Dose.—½ to 2 drms.

RHEI RADIX.

RHUBARB ROOT.

The root more or less deprived of its bark, sliced and dried, of *Rheum Palmatum*, *Rheum Officinale*, and probably other species, collected and prepared in China and Thibet.

Imported from Shanghai and Canton.

Test.—Free from decay, not worm-eaten, Boric Acid does not turn the yellow exterior brown. In the powder, adulterations are detected with difficulty.

Medicinal Properties.

Cathartic and astringent, the latter property not interfering with the former, as the purgative effect precedes the astringent. Used in dyspepsia attended with constipation; in diarrhœa when purging is indicated; in the second stage of cholera infantium; in chronic dysentery, and in typhous diseases when cathartic medicine is necessary. It is non-irritant, and increases the effect of other cathartics.

Is a certain though not powerful hepatic stimulant.—Dr. Rutherford.

4 grains of Powdered Rhubarb and 1 minim of Glycerine make a nice pill.

Dose.—As a stomachic, 1 to 5 grs. of the powder: as a purgative, 10 to 20 grs.

(In all the Pharmacopœias.)

The *Rheum Ponticum* is grown at Banbury, in Oxfordshire. In four or five years the roots attain the size of a man's arm; in drying it loses 75 per cent., and yields a fine yellow powder. A good deal is exported, and perhaps a little is used here.

Bicarbonate of Sodium in equal weight with Powdered Rhubarb takes off the astringency, and covers the taste; the addition of Peppermint Water still further hides it; or 1 drop of Oil of Peppermint, 30 grs. of Sugar, will disguise the taste of 15 grs. of Powdered Rhubarb. 1 drop Oil of Nutmeg, 30 grs. Sugar, and 10 grs. of powdered Rhubarb, make a good draught.

Preparations.

EXTRACTUM RHEI. Reddish-brown. [ALTERED.]

Rhubarb Root, in No. 40 powder, 16; Proof Spirit, 60; Distilled Water, a sufficiency: macerate the Rhubarb with 60 of the Spirit for forty-eight hours; pack in a percolator, and when the fluid ceases to pass, continue the percolation with Water until 100 of liquor has been collected or the Rhubarb exhausted. Evaporate the liquor by a water bath to a suitable consistence for forming pills.

Now percolated with Proof Spirit and afterwards with Water.

Dose.—3 to 6 grs. Brit. Ph. dose, 5 to 15 grs.

(Belg. Dan. Fr. and Russ. with water only; Ger. with Spirit and water mixed; U.S. with Alcohol.)

INFUSUM RHEI. [MODIFIED.]

Rhubarb Root, in thin slices, 1; boiling Distilled Water, 40: infuse half an hour, and strain. =(1 in 40).

Time reduced from one hour to half an hour.

Dose.—1 to 2 oz.

(Belg. 1 and 13⅓ (at 90° C.); Fr. 1 in 200 cold; not in the others.)

PILULA RHEI COMPOSITA. Intense brown. [ALTERED.]

Rhubarb Root, in fine powder, 3 oz.; Socotrine Aloes, in fine powder, 2¼ oz.; Myrrh, in fine powder, 1½ oz.; Hard Soap, in powder, 1½ oz.; English Oil of Peppermint, 1½ drms.; Glycerine, 1 oz.; Treacle, by weight, about 3 oz.: mix the powders with the Oil, add the Glycerine and Treacle, and beat into a mass.

Now made with Glycerine, but too much of both Glycerine and Treacle is ordered in *B. P.*

Dose.—5 to 10 grs.

(U.S. contains neither Soap nor Treacle; not in the others.)

PULVIS RHEI COMPOSITUS.

Rhubarb Root, in powder, 2; Light Magnesia, 6; Ginger, in powder, 1: mix. =(1 in 4½).

Dr. Gregory's Powder.

Dose.—30 to 60 grs. 5 to 10 grs. for children.

(Ger. Pulvis Magnesiæ cum Rheo, Carb. Magnes. 60, Sacch. 40, Rhei 15, Ol. Fœnic. 1⅓; Dan. Carb. Magnes. 1, Sugar 1, Rhubarb 1, Oil of Fennel $\frac{1}{100}$; Russ. Carb. Magnes. 4, Sugar 2, Rhubarb 1, Oil of Fennel $\frac{1}{25}$; U.S. Rhubarb 5, Magnesia 13, Ginger 1; not in Belg. or Fr.)

SYRUPUS RHEI. Intense brown. [MODIFIED.]

Rhubarb Root, in No. 20 Powder, 2; Coriander Fruit, in No. 20 Powder, 2; Refined Sugar, 24; Rectified Spirit, 8; Distilled Water, 24: mix the Rhubarb and Coriander, pack them in a percolator, pass the spirit and water, previously mixed, slowly through them, evaporate the liquid that has thus passed until it is reduced to 14, and in this, after it has been filtered, dissolve the Sugar with heat.

The product should weigh nearly 40, and its sp. g. be about 1·310.

It is now a rather thinner syrup.

Dose.—1 to 4 drms.

(Fr. Sirop de Rhubarbe Composé; Belg, Syr. Rhei, and Syr. Rhei Compositus; U.S. Syr. Rhei and Syr. Rhei Aromaticus; Ger. and Russ. with Cinnam. and Carb. of Potass; Austr. and Dan. with Carb. of Potass; all differ from Brit.)

TINCTURA RHEI. Intense brown; deposits slightly when kept.

Rhubarb Root, in No. 20 Powder, 2; Cardamom Seeds, freed from the pericarps, bruised, ¼; Coriander, bruised, ¼; Saffron, ¼; Proof Spirit, 20: macerate for forty-eight hours with 15 of the spirit, agitating occasionally, pack in a percolator, and when it ceases to drop, pour on the remaining spirit, press the marc, filter, and add proof spirit to make 20. =(1 in 10).

Dose.—As a stomachic, 1 to 2 drms.; as a purgative, ½ to 1 oz.

(Belg. and Fr. Rhubarb only, 1 in 5 by weight; U.S. Rhubarb 3, Cardamom ½, Diluted Alcohol to make 25.)

VINUM RHEI. Deep maroon; deposits very much when kept.

Rhubarb Root, in coarse powder, 1½ oz.; Canella Bark, in coarse powder, 60 grs.; Sherry, 20 oz.: macerate seven days, filter, and add Sherry to make 20. =(about 1 in 14).

Dose.—1 to 2 drms.

(U.S. 1 in 10; Belg. about 1 in 17; Fr. 3 in 50; Austr. Ger. and Russ. Tinct. Rhei Vinosa with Orange Peel and Cardamoms; Dan. 1 in 10 with Cardamoms and Gentian.)

Not Official.

EXTRACTUM RHEI COMP.

Ger. Ext. Rhei 3, Ext. Aloes 1, Resina Jalapæ ½, Soap 2.

Russ. Ext. Aloes 1, Ext. Rhei 3, Jalapini Saponis 1, Water 4, Spirit 4.

RHŒADOS PETALA.

RED-POPPY PETALS.

The fresh petals of *Papaver Rhœas*; from indigenous plants.

Medicinal Properties.

Of feeble opiate powers; chiefly used as a colouring agent.

(Austr. Papaver Rhœas; Belg. Flores Papaveris Rhœados; Fr. Coquelicot; Dan and Russ. Flores Rhœados; not in Ger. or U. S.)

Preparation.

SYRUPUS RHŒADOS. Deep red; crystallizes when kept.

Fresh Red Poppy Petals, 13; Refined Sugar, 36; Distilled Water, 20, or a sufficiency; Rectified Spirit, 2½: add the petals gradually to the water, heated in a water bath, frequently stirring, remove the vessel, and macerate twelve hours, press out the liquor, strain, add the Sugar, and dissolve by heat; when nearly cold, add the spirit, and Distilled Water to weigh 58, and measure 43½. Sp. g. 1·330. =(1 in 3½).

Dose.—1 to 2 drms.

(Belg. Dan. Fr. and Russ. all different strengths; not in Austr. Ger. or U.S.)

RICINI OLEUM.

CASTOR OIL.

The Oil expressed from the seeds of *Ricinus communis*. Pale straw. Sp. g. about 0·96.

Entirely soluble in all proportions of absolute Alcohol, Ether, Oil of Turpentine, and glacial Acetic Acid; 1 in 3½ of Rectified Spirit.

Medicinal Properties.

A mild and speedy cathartic. Particularly applicable to constipation from indurated fæces, or after swallowing acrid substances, or on the accumulation of acrid secretions. Used in diseases attended with irritation or inflammation of the bowels, as colic, diarrhœa, dysentery, and enteritis. The safest cathartic for infants, to whom a larger relative dose than to adults may be given, probably from their digesting more of the Oil. An enema may be made of 2 or 3 ounces, with some mucilaginous fluid.

Stimulates the intestinal glands, but not the liver.—Dr. Rutherford.

Dose.—½ to 1 oz. for adults, 1 to 3 drms. for infants.

One of the least disagreeable modes of taking Castor Oil is to pour it on to some milk contained in a wine glass, the interior and edges of which have been moistened with milk.

(In all the Pharmacopœias.)

Contained in Collodium Flexile, Linimentum Sinapis Comp., Pil. Hydrarg. Subchloridi.

Not Official.

Emulsiones.—Castor Oil, ½ oz.; Mucilage, ½ oz.; Syr. Ginger, ¼ oz.; Cinnamon Water, 1 oz.: mix.

Castor Oil, ½ oz.; yolk of Egg, ¼ oz.; Syrup, ¼ oz.; Peppermint Water, 1 oz.: mix.

A nice Emulsion for children is, Castor Oil, 2 drms.; solution of Potash, 20 mins.; Syrup, 5 drms.; Water to 2 oz. Dose, 2 teaspoonfuls.

Capsules.—Castor Oil in flexible capsules containing 30 minims and 60 minims in each.

The decoction of the leaves of *Ricinus* applied to the breast is said to produce an abundant supply of milk.

ROSÆ CANINÆ FRUCTUS.

FRUIT OF THE DOG ROSE. HIPS.

The ripe fruit of *Rosa canina;* and other indigenous allied species.

Medicinal Properties.

Slightly refrigerant and astringent. Chiefly used in confection, also as a pill basis, and for making electuaries and linctuses.

(Fr. Cynorrhodon; not in the other Pharmacopœias.)

Preparation.

CONFECTIO ROSÆ CANINÆ. Yellowish-brown.

Hips, deprived of their seed-like fruits, 1; Refined Sugar, 2: beat the hips to a pulp in a stone mortar, rub the pulp through a sieve, add the sugar, and mix thoroughly. =(1 in 3).

Dose.—60 grs. or more.

(Fr. Conserva Cynorrhodi; not in the other Pharmacopœias.)

ROSÆ CENTIFOLIÆ PETALA.

CABBAGE-ROSE PETALS.

The fresh petals, fully expanded, of *Rosa centifolia;* from plants cultivated in Britain.

Medicinal Properties.

Slightly laxative, and sometimes given with cathartics, but chiefly used in the preparation of rose-water.

(In all the Pharmacopœias; Austr. and U.S. Rosa Centifolia; Belg. Flores Rosæ Pallidæ; Dan. and Russ. Flores Rosæ Centifoliæ; Fr. Rose Pâle: Ger. Flores Rosæ.)

Preparation.

AQUA ROSÆ.

Fresh Petals, 1; Water, 5: distil 1. =(1 in 1).

An agreeable vehicle for medicines; employed in making lotions.

Dose.—1 to 2 oz.

(Same as Fr.; Dan. 1 in 3; Austr. Ger. and Russ. with Otto; U.S. and Belg. 1 in 2½.)

An equivalent quantity of petals, preserved whilst fresh with common salt, may be used.

ROSÆ GALLICÆ PETALA.

RED ROSE PETALS.

The unexpanded petals of *Rosa Gallica*, fresh and dried; from plants cultivated in Britain.

Medicinal Properties.

Astringent. Often used on account of their colouring matter.

(Austr. Flores Rosarum, Belg. Flores Rosæ Rubræ, Fr. Rose Rouge, Dan. and Russ. Flores Rosæ Gallicæ, U.S. Rosa Gallica; not in Ger.)

Preparations.

CONFECTIO ROSÆ GALLICÆ. Violet.

Fresh Red Rose Petals, 1; Refined Sugar, 3: beat the petals to a pulp in a stone mortar, add the Sugar, and rub well together. =(1 in 4).

Used as a pill basis. Applied to aphthous conditions of the mouth as a linctus.

Dose.—30 to 60 grs., or more.

(Belg. with powdered Petals, Sugar, and Rose Water; Fr. with powdered Petals, Sugar, Glycerine, and Rose Water; U.S. with powdered Petals, Sugar, Honey, and Rose Water; not in the others.)

INFUSUM ROSÆ ACIDUM.

Dried Red Rose Petals, broken up, 1; Diluted Sulphuric Acid, ½; boiling Distilled Water, 40: infuse for half an hour with the acid and water; strain. =(1 in 40).

A similar infusion was in use in 1674.

Astringent. An excellent vehicle for more powerful medicines. An agreeable gargle; but Borax and Alkalies change the colour to green.

Dose.—1 to 2 oz.

(Fr. 1 in 100, without acid; not in the other Pharmacopœias.)

SYRUPUS ROSÆ GALLICÆ. Red.

Dried Red Rose Petals, 1; Refined Sugar, 15; boiling Distilled Water 10: infuse the Petals in the Water two hours, squeeze through calico, heat the liquor to the boiling-point, and filter; add the Sugar, and dissolve with heat. The product should weigh 23, and measure 17¼. Sp. g. 1·335. =(1 in 17¼).

Mildly astringent. Used to add to mixtures on account of its colour.

Dose.—1 to 2 drms.

(Russ. 3 times stronger; Belg. 1 in 10; U.S. Fluid Extract 1, Syrup 9; not in the other Pharmacopœias.)

Not Official.

INFUSUM ROSÆ CUM ACIDO NITRICO.—Rose Petals, broken small, 2; Diluted Nitric Acid, ½; cold Distilled Water, 40: infuse two hours, frequently stirring, strain, and add Powdered Sugar, 1. Used for Quinine draughts.

Neither Sulphuric Acid nor a neutral Sulphate may be prescribed with Quinine in this infusion, for with either it will become turbid.

Not Official.

ROSÆ OLEUM.

OTTO DE ROSE.

A volatile oil distilled from the fresh flowers of *Rosa damascena*.

A pale yellowish liquid, in which when cooled crystalline scales are formed, but which disappear at about 60° F. (15·5° C.).

(Austr. Belg. (Essentia), Fr. Ger. Russ. and U.S.; not in Dan.)

ROSMARINI OLEUM.

OIL OF ROSEMARY.

Syn. Oleum Anthos.

The Oil distilled from the flowering tops of *Rosmarinus officinalis*. Pale straw. That distilled in Britain is superior to the imported.

Sp. g. several samples examined, they varied ·882—·916.

Solubility: in all proportions of Absolute Alcohol; 2 in 1 of Rectified Spirit; sparingly in Proof Spirit.

Test.—20 minims mixed with an equal bulk of Rectified Spirit does not give any coloration with 1 drop of Solution of Ferric Chloride: this distinguishes it from a large number of essential oils.

Contained in Linimentum Saponis, Tinctura Lavandulæ Composita.

Medicinal Properties.

A powerful stimulant. Used in hysteria and nervous headaches; externally as a rubefacient, and for its odour.

Dose.—1 to 5 minims, in pill, sugar, or emulsion.

(In all the Pharmacopœias; Belg. Essentia Rosmarini; Fr. Huile Volatile de Romarin; Dan. Ætheroleum Rosmarini.)

Preparation.

SPIRITUS ROSMARINI. Colourless.

Oil of Rosemary, 1; Rectified Spirit, 49: dissolve. =(1 in 50).

(Austr. from flowering tops, Essentia Rosmarini; Russ. 1 in 96; not in the other Pharmacopœias.)

Dose.—30 to 60 minims.

RUTÆ OLEUM.

OIL OF RUE.

The Oil distilled from the fresh herb of *Ruta graveolens*. Pale straw.

Sp. g. ·870.

Soluble in all proportions of Absolute Alcohol; sparingly in Rectified Spirit.

Medicinal Properties.

Stimulant and antispasmodic. Given in hysteria, convulsions, and amenorrhœa. A powerful topical stimulant and rubefacient.

Dose.—1 to 4 minims in emulsion.

(Belg. Essentia Rutæ; Fr. Russ. and U.S.; not in the others.)

Not Official.

Confectio.—Fresh Leaves, 1; Refined Sugar, 3: beat into a mass.

Enema.—2 to 4 drms. of Confection; warm Water, 10 oz.: administered in puerperal peritonitis, and for flatulent distension in children.

Syrupus Rutæ.—1 minim oil to each ounce of Syrup. *Dose.*—½ to 1 drm. for a child.

SABADILLA.

CEVADILLA.

The dried ripe seeds of *Schænocaulon officinale.*

The seeds are sometimes imported in, or mixed with, their pericarps, but these should be rejected before the seeds are used.

Imported from Vera Cruz and Mexico.

Medicinal Properties.

An acrid, drastic emeto-cathartic, operating occasionally with great violence; used as an anthelmintic in tænia, but Male Fern and other remedies are safer and equally effective. May be used cautiously for pediculi.

Chiefly introduced into the Pharmacopœia for the purpose of making Veratrine.

Dose.—In powder, 4 to 6 grs.

(Austr. Belg. Dan. Fr. (Cevadille), and Russ.; not in Ger. or U.S.)

SABINÆ CACUMINA.

SAVIN TOPS.

The fresh and dried tops of *Juniperus Sabina*, collected in spring from plants cultivated in Britain.

Medicinal Properties.

A powerful local and general stimulant, diaphoretic, emmenagogue, and anthelmintic; used occasionally in gout and chronic rheumatism. The dried leaves, or powder, externally as a local stimulant or escharotic, applied to warts, flabby ulcers, etc. The expressed juice diluted, or an infusion, as a lotion for gangrenous sores, scabies, and tinea capitis.

Dose.—In powder, 5 to 10 grs. two or three times daily; the powder and tincture are convenient forms of administration.

(Austr. Belg. Dan. Fr. Russ. and U.S.; not in Ger.)

Preparations.

OLEUM SABINÆ. Pale straw.

The Oil distilled in Britain from fresh Savin.

Sp. g. 0·910.

Soluble 4 in 1 of Rectified Spirit, in all proportions of Absolute Alcohol.

Dose.—1 to 5 minims.

(Belg. (Essentia), Russ. and U.S.; not in Austr. Dan. Fr. or Ger.)

TINCTURA SABINÆ. Deep greenish-brown.

Savin Tops, dried and coarsely powdered, 1; Proof Spirit, 8: macerate forty-eight hours, with 6 of the spirit, agitating occasionally; pack in a percolator, and when it ceases to drop, pour on the remaining spirit, press and filter, and add proof spirit to make 8.

=(1 in 8).

Dose.—15 to 60 minims.

(Belg. Fresh herb 1, Alcohol (92°) 1, Russ. 1 and 10; both by weight; not in Austr. Dan. Fr. Ger. or U.S.)

UNGUENTUM SABINÆ. Pea-green.

Fresh Savin Tops, bruised, 8; Yellow Wax, 3; Benzoated Lard, 16: melt the lard and the wax together on a water bath, add the Savin, digest twenty minutes, strain and press through calico. =(1 in 3⅜).

Should be freshly prepared, as it does not keep.

To keep up suppuration from a blister or issue by preventing it from healing, and for application to indolent ulcers.

(Belg. Ext. Sabinæ 1, Simple Ointment 9; Dan. Savin Tops 4, Spirit 8, Lard 12, Yellow Wax 3; Ger. Extract 1, Wax Ointment 9; Russ. Extract 1, Spirit 1, Lard 9; not in Austr. Fr. or U.S.)

Antidotes.—In case of poisoning by Savin, emetics should first be given; Castor oil, Linseed poultices to the abdomen, opiates and demulcents.

SACCHARUM LACTIS.

SUGAR OF MILK.

$C_{11}H_{24}O_{12}$, eq. 348.

A crystallized Sugar obtained from the Whey of Milk by evaporation; manufactured largely in Switzerland. Nearly white.

Solubility: 1 in 6 of cold Water; 1 in 1 of boiling Water; almost insoluble in Rectified Spirit.

Medicinal Properties.

As a non-nitrogenous article of diet in consumption and other pulmonary diseases, and in cases of extreme irritability of the stomach, following profuse loss of blood. Used to mix with the food of children; dissolved in water, and mixed with cows' milk, it forms a good substitute for that of the mother. Useful for rubbing with strong medicinal powders, in order to divide them.

Dose.—60 to 120 grs. or more, in water.

(Austr. Belg. Fr. (Sucre de Lait), Dan. Ger. Russ. and U.S.)

Used in the preparation of Pulvis Elaterini Compositus.

SACCHARUM PURIFICATUM.

REFINED SUGAR.

Syn. Sucrose.

$C_{12}H_{22}O_{11}$, eq. 342.

In the former Pharmacopœias Cane Sugar was specified. Now Sucrose from any source may be used so long as it answers the tests. Compact crystalline conical loaves known in commerce as Lump Sugar.

Readily and completely soluble in Water, forming a clear bright syrup, which yields no red or yellowish precipitate, or scarcely a trace, on heating it to near the boiling point of water for a short time with a little Solution of Sulphate of Copper and excess of Solution of Potash.

Solubility: 100 in 45 of Water measures 113; 1 in 100 of Rectified Spirit.

(Austr. Belg. Fr. (Sucre de Canne), Dan. Ger. Russ. and U.S.)

Medicinal Properties.

Demulcent, used in catarrhal affections in the form of candy, syrup, etc. Employed in pharmacy to render oils miscible with water.

Enters into the composition of several mixtures and pills, and all the confections, syrups, and lozenges.

Preparation.

SYRUPUS. Colourless.

Refined Sugar, 6; Distilled Water, 3: dissolve the sugar in the water with the aid of heat, and when cool add water to weigh 9, and measure very nearly 7. Sp. g. 1·330. =(1 in 1½).

(In all the Pharmacopœias.)

It is convenient to remember that 7 measures of Syrup contain 6 of Sugar.

Not Official.

SALEP.

The prepared tubers of Orchis Moris, and other species of Orchis.

(Austr. Belg. Dan. Fr. Ger. and Russ.)

Mucilago Salep. (Belg. Ger. and Russ.)—Powdered Salep 1: agitate well with Cold water 10; pour on to this, Boiling water 90, and stir till cold.

(Dan. Mixtura Saleb, same strength, but containing Syrup of Poppies.)

Salib Misri, the Salep of the Indian Bazaars, is derived from a species of Eulophia.

SALICINUM.

SALICIN.

$C_{13}H_{18}O_7$, eq. 286.

[NEW.]

A crystalline glucoside obtained by treating the bark of Salix alba, and other species of Salix, and the bark of various species of Populus, with hot water, removing tannin and colouring matter from the decoction, evaporating, purifying, and recrystallizing.

Now included in B. P.; was a Not Official in Companion 1864.

In colourless silky acicular crystals and laminæ, bitter, inodorous.

Solubility: 1 in 28 of Water; 1 in 1 of boiling Water; 1 in 28 of Rectified Spirit; insoluble in Ether.

Tests.—When ignited it emits vapours having the odour of meadow-sweet, and leaves no residue; cold concentrated Sulphuric Acid dissolves it, forming a red colour.

(U.S.; not in the other Pharmacopœias.)

Medicinal Properties.

Tonic, analogous to those of the Sulphate of Quinine, and less liable to irritate the stomach; employed in dyspepsia and intermittent diseases, and specially recommended in acute rheumatism, in doses of 5 to 30 grs. *B. M. Journ.*, May 20th, 1876.

Dose.—5 to 20 grs.

SAMBUCI FLORES.

ELDER FLOWERS.

The fresh flowers of *Sambucus nigra*, from indigenous plants.

Medicinal Properties.

Mildly stimulant. Externally, as a discutient, in the form of poultice, fomentation, or ointment. Essence or strong water as a cosmetic.

Scent much disliked by insects; bruised leaves of Elder in the hat and rubbed on the face prevent flies settling on the person.

Preparations.

AQUA SAMBUCI.

Fresh Elder flowers, separated from the stalks, 1; Water, 5: distil 1. =(1 in 1).

Or an equivalent quantity of flowers preserved whilst fresh with common salt.

(Belg. 3 in 10; Fr. Eau de Sureau, with dried flowers, 1 in 4; Dan. 1 in 10; Russ. concentrated only; not in Austr. Ger. or U.S.)

Chiefly used as a perfume; it is, however, a pleasant vehicle for medicines, and may be used for lotions.

There is always a large quantity of vegetable matter in this water, which, causing it to become acid, impairs its odour. In practice it is better to distil it of double strength and dilute it when required.

Not Official.

Unguentum.—Fresh Elder Flowers and Lard, equal parts: melt the Lard, add the Flowers, continue the heat, stir for ten minutes, and strain.

A cool, soothing application to irritable sores, but the reverse if allowed to grow rancid.

Unguentum Viride.—*St. George's.* Ointment of Elder Leaves, ½ oz.; Elemi Ointment, 1 oz.; Copaiba, 1½ fl. drms.

Excellent for sloughing sores.

SANTALI OLEUM.

OIL OF SANDAL WOOD.

Syn. Oleum Santali Flavi.

[NEW.]

The oil distilled from the wood of *Santalum Album*.

Now included in B. P.; was a Not Official in Companion 1866.

Pale yellow. Sp. g. about 0·96.

(U.S.; not in the other Pharmacopœias.)

Medicinal Properties.

Has been prescribed extensively for gonorrhœa as a mixture or in capsules.

Not Official.

Mistura.—Oleum Santali m xxx; Mucilage of Acacia ʒi; Syrup ʒi; Tincture of Orange ʒss.; Water ℥ ss. for a dose three times a day.

Capsules.—Containing 10 and 20 minims in each.

SANTONICA.

The dried unexpanded flower-heads or capitula of *Artemisia maritima, var Stechmanniana*, imported from Russia.

(Austr. Cina; Belg. Dan. Ger. and Russ. Flores Cinæ; Fr. Semen Contra; U.S. Santonica.)

Dose.—10 to 60 grs.

Used to prepare Santoninum.

SANTONINUM.

SANTONIN.

$C_{15}H_{18}O_3$, eq. 246.

A crystalline neutral principle, obtained from Santonica (or *Semen contra**).

In colourless, flat, rhombic prisms, feebly bitter.

Solubility: sparingly in Water; 1 in 350 of boiling Water; 1 in 40 of Rectified Spirit; 1 in 4 of boiling Rectified Spirit; 1 in 160 of Ether; 1 in 2 of Chloroform; about 1 in 400 of Olive Oil; slightly in Glycerine and in Solution of Potash.

Tests.—Not dissolved by diluted mineral acids. Leaves no residue when burned with free access of air. Added to warm alcoholic Solution of Potash, it yields a violet-red colour.

(Austr. Belg. Dan. Fr. Ger. Russ. and U.S.)

Medicinal Properties.

Anthelmintic. Tasteless whilst in a crystalline form, and thus given it is a pleasant vermifuge for children. Useful both against tape-worm and thread-worms. Said to have been used with success in intermittents.

Dose.—2 to 3 grs. for children.

About three doses are sufficient; one every other night, followed by a brisk cathartic the morning after each dose.

It frequently affects the vision, causing all objects to appear green.

Preparation.

TROCHISCI SANTONINI. [NEW.]

Made with Santonin, Sugar, and Gum Acacia.

Each lozenge contains one grain of Santonin.

Now included in B. P.; was a Not Official in Companion 1877.

(Austr. Belg. Dan. Fr. Ger. and Russ.; not in U.S.)

SAPO.

SOAP.

Soaps embrace all those compounds which result from the reaction of salifiable bases with fats and oils.

SAPO ANIMALIS.

CURD SOAP.

A Soda Soap made with purified animal fat, consisting principally of stearin.

White, or with a very light greyish tint, and nearly odourless.

Solubility: sparingly in Water; 1 in 1½ of boiling Water; partially in Rectified Spirit; almost entirely 1 in 2 of boiling Rectified Spirit.

Tests.—It does not impart a greasy stain to paper. The ash obtained by incineration does not deliquesce.

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* *Semen contra* is not a seed, but the unexpanded flower-heads of a species of *Artemisia*, imported from Russia, and is the only so-called worm-seed which yields Santonin in quantity worth extracting.

Preparations.

EMPLASTRUM SAPONIS. Dusky-white. [MODIFIED.]

Curd Soap, in powder, 6; Lead Plaster, 36; Resin, in powder, 1: to the lead plaster, previously melted, add the soap and the resin, first liquefied; then, constantly stirring, evaporate to a proper consistence. =(1 of soap in 7⅙).

Now made with Curd Soap in place of Hard Soap.

(Belg. 1 in 15; Fr. about 1 in 18, also with Camphor; U.S. 1 in 10; Austr. Empl. Saponatum, 1 in 16; Dan. 1 in 11½; Ger. Empl. Saponatum, 1 in 17; Russ. 1 in 15; all with Wax and Camphor.)

Equal weights of Emplastrum Plumbi and Emplastrum Saponis spread on Amadou are useful to shield any part of the foot from pressure of the boot.

EMPLASTRUM SAPONIS FUSCUM. Dusky-brown. [MODIFIED.]

Curd Soap, in powder, 10; Yellow Wax, 12½; Oxide of Lead (in powder), 15; Olive Oil, 20; Vinegar, 160: boil the vinegar with the Oxide over a slow fire, or by a steam-bath, constantly stirring them until they unite; then add the soap, and boil again in a similar manner until all the moisture is evaporated: lastly, mix with the wax previously dissolved in the oil, and continue the process till the product takes the consistence of a plaster.

Now made with Curd Soap in place of Hard Soap.

SAPO DURUS.

HARD SOAP.

Syn. WHITE CASTILE SOAP.

Soap made with Olive Oil and Soda.

Solubility: the greater part is soluble 1 in 20 of Water; entirely 1 in 1½ of boiling Water; 1 in 2 of boiling Rectified Spirit.

Test.—Soluble in Rectified Spirit. Brit. Ph.

The Author finds that of 30 grains of White Castile Soap digested for four days in 1 ounce of cold Rectified Spirit, only 24 grains are dissolved; when heated it all dissolves.

The Sapo Durus of the Pharmacopœia refers, without doubt, to the White Castile Soap; Curd Soap cannot be substituted for this, for it is not simply a combination of Olive Oil and Soda, but is a compound of Mutton-fat with Soda, and if used in any preparations of the Pharmacopœia, produces a result widely different from that of White Castile Soap.

Medicinal Properties.

Laxative, antacid, and antilithic. Combined with Rhubarb, it is administered in dyspepsia attended with constipation and torpor of the liver. Large and frequent doses, wrapped in wafer paper, are most effective in removing gall-stones.

Dose.—5 to 15 grs.

(In all the Pharmacopœias, Sapo Medicatus; Fr. Savon Blanc; U.S. Sapo.)

Preparations.

LINIMENTUM SAPONIS. Faint straw colour. [ALTERED.]

Hard Soap, in fine shavings, 2 oz.; Camphor, 1 oz.; Oil of Rosemary, 3 drms.; Rectified Spirit, 16 oz.; Distilled Water, 4 oz.: mix the water with the spirit, add the other ingredients, digest at a temperature not exceeding 70° F., agitating occasionally for seven days, and filter. =(1 in 10 nearly).

There is now less Soap, Camphor, and Spirit, and more Water.

The temperature 70° F. was introduced in Brit. Ph. 1864, because it was found that when this temperature was exceeded, the liniment was always more or less gelatinous in cold weather, and could not be rendered bright again by warmth.

Contained in Linimentum Opii.

(U.S. about 1 in 10; Fr. Lin. Savonneux 1 in 10.)

LINIMENTUM SAPONATO-CAMPHORATUM LIQUIDUM.

Austr. Sapo veneti, 8; Sapo communis, 16; Alcohol (70°), 100; Ol. Lavand, 1; Ol. Rosmarini, 1; Liq. Ammoniæ, 4; Spirit Camphor, 2.

Belg. Spirit Saponis, 725; Spirit Camphor, 225; Liquor Ammoniæ, 30; Ol. Rosmarini, 15; Ol. Thyme, 5.

Ger. Spirit Saponis, 350; Spirit Camphor, 120; Liquor Ammoniæ, 24; Ol. Rosmarini, 4; Ol. Thyme, 2.

Russ. Saponis Hispanici, 36; Camphor, 5; Rectified Spirit (70°), 224; Liquor Ammoniæ, 8; Ol. Rosmarini, 2; Ol. Thyme, 1.

PILULA SAPONIS COMPOSITA. *See* OPIUM.

1 gr. Opium powder in 6 nearly.

Not Official.

GLYCERINE SOAP.—There are several makers in this country and on the continent. The soaps are transparent and pleasant to use.

JUNIPER TAR SOAP, BRECKNELL'S PURE YELLOW SOAP, OXIDE OF ZINC SOAP, CARBOLIC ACID SOAP, are occasionally prescribed for skin diseases.

STEER'S OPODELDOC is solid, and made as directed for Arnica Opodeldoc, substituting Sp. Rosemary for Tinct. Arnica. *See* ARNICA, page 67.

SAPO MOLLIS.

SOFT SOAP.

Soap made with Olive Oil and Potash.

A transparent soft solid of a greenish-yellow colour.

Solubility: 1 in 4 of Water; 1 in 1 of boiling Water; almost entirely 1 in 1 of Rectified Spirit.

Tests.—Soluble in Rectified Spirit; not imparting an oily stain to paper.

The ash obtained by incineration is very deliquescent.

(Austr. and Ger. Sapo Kalinus; Belg. Russ. and U.S. Sapo Viridis; not in Dan. or Fr.)

Contained in Linimentum Terebinthinæ.

SARSÆ RADIX.

JAMAICA SARSAPARILLA.

The dried root of *Smilax officinalis*, native of Central America. Brought into Europe about 1630.

Medicinal Properties.

Alterative and tonic. It is of especial service in secondary syphilis, alone or in combination with other remedies. Also in chronic rheumatism, with sudorifics and anodynes, and in cachectic diseases, chronic abscesses attended with profuse discharge, and many maladies connected with a depraved state of the system.

The virtues of Sarsaparilla have been much disputed, on account of the difficulty of explaining its action; but good Jamaica Sarsaparilla doubtless possesses the qualities described above.

(In all the Pharmacopœias.)

Incompatibles.—Alkalies which accelerate its decomposition.

Preparations.

DECOCTUM SARSÆ.

Jamaica Sarsaparilla, cut transversely, 1; boiling Distilled Water, 12: digest for an hour, boil ten minutes in a covered vessel, cool, strain, and add water to make 8. The product should measure 8. =(1 in 8.)

Dose.—½ to 1 pint daily, in divided doses.

(Belg. 1 in 10; not in the other Pharmacopæias.)

DECOCTUM SARSÆ COMPOSITUM. [ALTERED.]

Jamaica Sarsaparilla, cut transversely, 2½ oz.; Sassafras Root, in chips, ¼ oz.; Guaiacum Wood turnings, ¼ oz.; dried Liquorice Root, bruised, ¼ oz.; Mezereon Bark, ⅛ oz.; boiling Distilled Water, 30 oz.: digest for one hour, boil ten minutes in a covered vessel, cool and strain. Add Water or otherwise so as to make the product measure 20 oz. =(1 in 8).

Now made with dried Liquorice Root instead of fresh.

Dose.—½ to 1 pint daily, in divided doses.

(U.S. 1 in 10; Austr. and Ger. fortius and mitius differing widely from ours in composition; not in Belg. Fr. or Russ.)

EXTRACTUM SARSÆ LIQUIDUM. Intense reddish-brown. [ALTERED.]

Jamaica Sarsaparilla, in No. 40 Powder, 40; Proof Spirit, 40; Sugar, 5; Distilled Water (temp. 160° F.), 240: macerate the Sarsaparilla with the Spirit in a closed vessel for 10 days; then press out 20 of liquor, and set this aside; digest the pressed residue in the Water at 160° F. (71·1° C.) for sixteen hours, then strain and press out the liquid, dissolve the Sugar in this, and evaporate by a water bath to about 18, mix the spirituous and aqueous liquids, and make up the volume to 40 by the addition of Distilled Water. =(1 root in 1).

Sarsaparilla is now ordered in No. 40 powder and digested in Spirit previous to the extraction with water.

Note.—B. P. states that improved exhaustion of the root requires this increased proportion of product as compared with that of B. P. 1867.

A quantity of each preparation was evaporated to dryness and then dried at 105° C. B. P. 1867 yielded 22·4 per cent. and B. P. 1885 yielded 12·3 per cent. after deducting the added sugar. Both preparations were made from the same bundle of Sarsaparilla. Both preparations froth to about the same extent when shaken up with water.

Dose.—1 to 4 drms.

(U.S. with Glycerine, about 1 in 1; not in the others.)

Not Official.

Extractum Sarsæ Compositum Liquidum, Liquid Compound Extract of Sarsaparilla.—Jamaica Sarsaparilla, cut transversely, 16 oz.; Sassafras, sliced, 2 oz.; Guaiacum Wood, rasped, 2 oz.; Liquorice Root, bruised, 2 oz.; Mezereon, cut, 1 oz.; Rectified Spirit, 1 oz.; Distilled Water, 6 pints: macerate the first five ingredients in one half of the water, at a temperature not exceeding 160° F., for six hours, and decant the liquor; digest the residue in the remainder of the water for the same time, and express; filter the mixed liquors, and evaporate by a water bath to 7 fluid ounces; when cold add the spirit. =(2 in 1).

Dose.—1 to 4 drms.

(U.S. (similar) with Glycerine; not in the other Pharmacopœias.)

SASSAFRAS RADIX.

SASSAFRAS ROOT.

The dried root of *Sassafras officinale*, reduced to chips or shavings.

Medicinal Properties.

Stimulant and diaphoretic. Used as an adjuvant to other medicines, the flavour of which it improves, while it renders them more cordial to the stomach. Used in chronic rheumatism, cutaneous eruptions, scorbutic and syphilitic affections.

The bark of the root, which is stronger, is now an article of commerce.

(Dan. Fr. Ger. and Russ. the Root; U.S. the Root-bark and the pith of the stems; not in Austr. or Belg.)

Contained in Decoctum Sarsæ Compositum.

SCAMMONIUM.

SCAMMONY.

A Gum Resin obtained by incision from the living root of *Convolvulus Scammonia*, chiefly from Smyrna, in Asia Minor; the juice, collected in shells, is allowed to concrete. The purest is known in commerce as Virgin Scammony.

Solubility: almost entirely dissolved in boiling diluted Rectified Spirit.

Tests.—It does not effervesce with Hydrochloric Acid. Boiling Water, agitated with the powder, cooled and filtered, does not strike a blue colour with Tincture of Iodine—indicating absence of Starch. Ether removes about 75 per cent. of Resin; and what remains is chiefly soluble Gum with a little moisture.

NOTE.—Has been adulterated with Resin prepared from the root, which can be detected by odour and colour on comparison with a genuine specimen.—P. J., Nov. 1883, p. 397.

Medicinal Properties.

A powerful drastic cathartic, apt to occasion griping. Usually given with Calomel, and its action is corrected by the Sulphate of Potassium. May be used in all cases of torpid bowels, and for removing scybala; also as a vermifuge for children.

Dose.—5 to 10 grs. of pure Scammony or of the Resin.

(Belg. Dan. Fr. and U.S.; not in the others.)

Contained in Pilula Colocynthidis Composita, Pilula Colocynthidis et Hyoscyami.

Preparations.

MISTURA SCAMMONII. [ALTERED.]

Scammony, in powder, 4 grs.; Fresh Milk, 2 oz.: triturate, and form an emulsion. =(1 in 240).

(Not in the other Pharmacopœias.)

Now made with Virgin Scammony instead of Resin of Scammony as suggested in Companion.

Dose.—The quantity of the formula for an adult, half for a child.

SCAMMONIÆ RADIX.

The dried root of *Convolvulus Scammonia*.

From Syria and Asia Minor.

Medicinal Properties.

An energetic cathartic. May be used when brisk action is needed, but on account of its griping properties it is rarely used alone. In combination it promotes the action of other medicines, whilst its own harshness is mitigated.

Is a powerful intestinal, but a feeble hepatic irritant.—Dr. Rutherford.

(Belg. Ger. and Russ.; not in the other Pharmacopœias.)

SCAMMONIÆ RESINA.

RESIN OF SCAMMONY

Made by a patented process, and said to be equal to Virgin Scammony. A formula for its preparation is given in the British Pharmacopœia.

16 oz. Root produce 1⅛ oz. Resin.

It is soluble in almost all proportions of Rectified Spirit and Ether; also soluble in Solution of Potash.

(Belg. Fr. Russ. and U.S.; not in Austr. Dan. or Ger.)

Dose.—3 to 8 grs. in powder, or in emulsion with 3 or 4 oz. of milk.

Contained in Extract. Colocynthidis Compositum.

Preparations.

CONFECTIO SCAMMONII. Light olive-brown. [ALTERED.]

Resin of Scammony, in fine powder, 3 oz.; Ginger, in fine powder, 1½ oz.; Oil of Caraway, 1 drm.; Oil of Cloves, ½ drm.; Syrup, 3 oz.; Clarified Honey, 1½ oz.: rub the powders with the Syrup and the Honey into a uniform mass, then add the Oils, and mix. =(1 in 3).

Now made with Resin of Scammony in place of Scammony.

(Not in the other Pharmacopœias.)

Dose.—10 to 30 grs.

PILULA SCAMMONII COMPOSITA.

Resin of Scammony, 1; Resin of Jalap, 1; Curd Soap in powder, 1; Strong Tincture of Ginger, 1; Rectified Spirit, 2: dissolve with a gentle heat, and evaporate to a pill consistence. Product, 3¼.

Dose.—5 to 15 grs.

PULVIS SCAMMONII COMPOSITUS. Light olive-brown. [ALTERED.]

Resin of Scammony, 4; Jalap, 3; Ginger, 1; all in fine powder: mix. =(1 in 2.)

Now made with Resin of Scammony in place of Scammony.

(Not in the other Pharmacopœias.)

Dose.—10 to 20 grs.

SCILLA.

SQUILL.

The bulb of *Urginea Scilla*, divested of its dry membranous outer scales, sliced and dried. From the Mediterranean coasts.

Medicinal Properties.

A stimulant expectorant and diuretic. It increases the secretion of the bronchial mucous membrane and aids the expectoration of mucus. The tincture largely diluted with water is the best mode of administering it, a teaspoonful mixed with three tablespoonfuls of water, should be at the bedside of a bronchitic patient, and about a teaspoonful taken as often as required to relieve cough and expel tough phlegm, which it does most effectually: should, however, the spasmodic cough continue, despite of this, the following mixture generally quiets it:—

℞ Potassii Citratis, Ammon. Citratis āā. ʒ iss.; Tinct. Belladonnæ, ʒ iss.; Spir. Chloroformi, ʒ i.; Aquæ ad ℥viij. Two tablespoonfuls for a dose.

As an expectorant, it is used with Ipecacuanha and Ammoniacum; as a diuretic, generally given with Mercury.

Dose.—1 to 2 grs. of the powder.

(In all the Pharmacopœias.)

Preparations.

ACETUM SCILLÆ. Pale straw. [MODIFIED.]

Dried Squill, bruised, 2½: Diluted Acetic Acid, 20; macerate the Squill in the Acid for seven days, then strain with expression, and filter. =(1 in 8).

The Spirit is now omitted.

Dose.—15 to 40 minims.

(In all the Pharmacopœias.)

OXYMEL SCILLÆ. Brown.

Vinegar of Squill, 5; Clarified Honey, 8: mix, and evaporate till the sp. g. is 1·32.

Dose.—½ to 1 drm.

(Dan. Vinegar of Squill 1, Honey 3; Fr. Vinegar of Squill 1, Honey 4; Austr. Ger. and Russ. Vinegar of Squill 1, Honey 2.)

PILULA SCILLÆ COMPOSITA. Brown.

Squill, in fine powder, 1¼; Ginger, in fine powder, 1; Ammoniacum, in powder, 1; Hard Soap, in powder, 1; Treacle, by weight, 2, or a sufficiency: mix the powders, add the Treacle, and beat into a mass. =(1 in 5).

Dose.—5 to 10 grs.

(Belg. 1 in 7; not in the other Pharmacopœias.)

SYRUPUS SCILLÆ. Yellow.

Vinegar of Squill, 20; Refined Sugar, 40: dissolve with the aid of a little heat.

Sp. g. about 1·345.

Dose.—½ to 1 drm.

(Belg. Vinegar of Squill 347, Sugar 653; U.S. Vinegar of Squill 20, Sugar 30; Water to make 50; Russ. about half the strength and without Vinegar; not in the others.)

TINCTURA SCILLÆ. Straw.

Dried Squill, bruised, 1; Proof Spirit, 8: macerate for forty-eight hours with 6 of the spirit, agitating occasionally, pack in a percolator, let it drain, and pour on the remaining spirit; when it ceases to drop, press, filter, and make up with Proof Spirit to 8. =(1 in 8).

Dose.—10 to 30 minims with Paregoric or Tincture of Belladonna for cough.

(U.S. 15 in 100; Belg. Fr. Ger. and Russ. 1 and 5, all by weight; not in Austr. or Dan.)

SCOPARII CACUMINA.

BROOM TOPS.

The fresh and dried tops of *Cytisus scoparius*, from indigenous plants.

Medicinal Properties.

Diuretic and cathartic. Employed in dropsical complaints.

(U.S. Scoparius; not in the other Pharmacopœias.)

Preparations.

DECOCTUM SCOPARII.

Broom Tops, dried, 1; Distilled Water, 20: boil ten minutes, and strain. The product should measure 20. =(1 in 20).

Dose.—2 to 4 oz.

(Not in the other Pharmacopœias.)

SUCCUS SCOPARII. Dark brown.

Bruise fresh Broom Tops in a stone mortar, express the juice, and to every 3 measures of juice add 1 of Rectified Spirit; set aside seven days, and filter. Keep it in a cool place.

Dose.—1 to 2 drms.

SENEGÆ RADIX.

SENEGA ROOT.

The dried root of *Polygala Senega*, from North America.

(In all the Pharmacopœias.)

Medicinal Properties.

A stimulating expectorant and diuretic, and, in large doses, emetic and cathartic. Used in asthenic and chronic bronchitis, and in dysmenorrhœa and albuminuria.

Dose.—In powder, 15 to 20 grs.

Preparations.

INFUSUM SENEGÆ.

Senega Root, in No. 20 powder, 1; boiling Distilled Water, 20: infuse half an hour, and strain. =(1 in 20).

Dose.—1 to 2 oz.

(Fr. Tisane de Polygala, 1 in 100; not in the other Pharmacopœias.)

TINCTURA SENEGÆ. Reddish-brown.

Senega Root, in No. 40 powder, 1; Proof Spirit, 8: macerate forty-eight hours with 6 of the spirit, agitating occasionally, pack in a percolator and let it drain; pour on the remaining spirit; when the fluid ceases to drop, press, filter, and make up with Proof Spirit to 8. =(1 in 8).

Dose.—½ to 2 drms.

(Fr. and Russ. 1 and 5, by weight; not in the others.)

Not Official.

Syrupus Senegæ.

Russ.—Percolate 4 oz. Senega Root with 32 oz. Proof Spirit, evaporate at 160° F. to 8 oz., and add 15 oz. of Sugar.

U.S.—Fluid Extract Senega, 160; Water of Ammonia, 4;] Sugar, 600; Water to make 1000.

SENNA.

SENNA.

The dried leaflets of various species of *Cassia*. The British

Pharmacopœia recognises two kinds: the Alexandrian Senna (*Senna Alexandrina*), imported from Alexandria, being the leaflets of *C. acutifolia* carefully freed from the flowers, pods, and leaf-stalks; and the Tinnivelly Senna (*Senna Indica*), the leaflets of *C. angustifolia* from plants cultivated in Southern India. The Alexandrian Senna must be free from admixture of leaves, flowers, and fruit of the Argel (*Solenostemma Argel*). The unequally oblique base and freedom from bitterness distinguish the Senna from Argel leaves; the latter are also thicker, greyer, and more wrinkled.

Medicinal Properties.

A general and efficient laxative in cases of occasional or habitual constipation. Given in large doses, it occasions griping and nausea; it is therefore best administered with aromatics. Used in dyspepsia, and in febrile and inflammatory diseases; but as it is somewhat drastic, it must be avoided when the alimentary canal is much affected.

The different kinds of Senna, freed from stalks, are of nearly equal medicinal value.

Is an hepatic stimulant of feeble power.—Dr. Rutherford.

Dose.—Of powder, 10 to 30 grs.

(In all the Pharmacopœias.)

Preparations.

CONFECTIO SENNÆ. Almost black.

Senna, in fine powder, 7; Coriander, in fine powder, 3; Figs, 12; Tamarinds, 9; Cassia Pulp, 9; Prunes, 6; Extract of Liquorice, 1; Refined Sugar, 30; Distilled Water, 24. Boil the Figs and Prunes gently in the water four hours, and add water to make up 24; then add the Tamarinds and Cassia; macerate for two hours, and rub the pulp through a hair sieve; dissolve the Sugar and Liquorice in the pulped product with a gentle heat; and while still warm mix in the Senna and Coriander. The product should be made to weigh 75, either by evaporation, or the addition of more water.

=(1 in 11 nearly.)

Dose.—60 to 120 grs.

(In all the Pharmacopœias, but differing in composition.)

INFUSUM SENNÆ. [ALTERED.]

Senna, 1 oz.; Ginger, sliced, 28 grs.; boiling Distilled Water, 10 oz.: infuse half an hour, and strain. =(1 in 10).

Ginger reduced from 30 to 28 grs., and time reduced from one hour to half an hour.

Dose.—1 to 2 oz.

(Austr. Inf. Laxativum, about 1 in 8, with Manna; Belg., 1 in 10; Dan. Compound, 1 in 10; Ger. and Russ. Composita, 1 in 8, with Manna and Rochelle Salt.

As this Infusion quickly spoils by keeping in warm weather, the addition of 1 gr. of Nitre to each ounce will be found to impart great conservative power. From 20 oz. of Infusion only 14 oz. drain out.

MISTURA SENNÆ COMPOSITA. [ALTERED.]

Infusion of Senna, 15; Sulphate of Magnesium, 4; Liquid Extract of Liquorice, 1; Tincture of Senna, 2½; Compound Tincture of Cardamoms, 1½: dissolve the Sulphate of Magnesium in the Infusion with the aid of a gentle heat, then add the Liquid Extract and the Tinctures. =(1 Sulphate of Magnesium in 5).

Liquid Extract used in place of Extract of Liquorice and Tincture of Cardamoms increased.

Dose.—1 to 1½ oz.

(U.S. Infusum Senna Comp.—Senna 6, Manna 12, Sulphate of Magnesium 12, Fennel 2, Boiling Water 100, Water sufficient to weigh 100 when cold.)

SYRUPUS SENNÆ. Intense red. [MODIFIED.]

Senna, broken small, 16 oz.; Oil of Coriander, 3 minims; Refined Sugar, 24 oz.; Distilled Water, 100 oz., or a sufficiency; Rectified Spirit, 3 oz.: digest the Senna in 70 oz. of the water twenty-four hours at a temperature of 120° F., press, and strain; digest the marc in 30 oz. of the water six hours, press, and strain; evaporate the mixed liquors to 10 oz.; when cold, add the Rectified Spirit, containing the Oil of Coriander. Filter, and wash the filter with water to make 16 oz.; add the Sugar, and dissolve with heat. Should weigh 42 oz., and measure 32 oz. Sp. g. 1·310. =(1 in 2).

Quantity of Spirit increased.

Dose.—1 to 2 drms. Brit. Ph. dose, 1 to 4 drms.; for children, ½ to 1 drm.

(Belg. Dan. Ger. and Russ. with Fennel and Manna; Austr. with Aniseed and Manna; U.S. similar to B. P.; not in Fr.)

An excellent purgative, and pleasant to take; it does not gripe in moderate doses.

TINCTURA SENNÆ. Black.

Senna, broken small, 5; Raisins, freed from seeds, 4; Caraway Fruit, bruised, 1; Coriander Fruit, bruised, 1; Proof Spirit, 40: macerate the ingredients forty-eight hours in three-fourths of the spirit, agitating occasionally; pack in a percolator, and when it ceases to drop, pour on the remaining spirit; press, filter, and make up with Proof Spirit to 40. =(1 in 8).

Dose.—1 to 4 drms.

(Belg. and Fr. 1 in 5, by weight; not in the others.)

SERPENTARIÆ RHIZOMA.

SERPENTARY RHIZOME.

The dried rhizome and rootlets of *Aristolochia Serpentaria*, or of *Aristolochia reticulata*.

From the southern parts of North America.

Medicinal Properties.

Stimulant, tonic, and diaphoretic. A valuable remedy in the low stage of typhus, combined with Carbonate of Ammonium, given when the tongue is dry and brown or black, and the pulse low. Used in dyspepsia and chronic rheumatism.

Dose.—Of the powder, 10 to 15 grs.

(In all the Pharmacopœias except Ger.)

Preparations.

INFUSUM SERPENTARIÆ. [MODIFIED.]

Serpentary Rhizome, in No. 20 Powder, 1; boiling Distilled Water, 40; infuse half an hour and strain. =(1 in 40).

Time reduced from two hours to half an hour.

Dose.—1 to 2 oz.

(Not in the other Pharmacopœias.)

TINCTURA SERPENTARIÆ. Reddish-brown.

Serpentary Rhizome, in No. 40 Powder, 1; Proof Spirit, 8: macerate forty-eight hours with 6 of the spirit, agitating occasionally, pack in a percolator, and let it drain; pour on the remaining spirit, and when it ceases to drop, press, filter, and make up with Proof Spirit to 8. =(1 in 8).

Dose.—½ to 2 drms.

(U.S. 1 in 10; by weight; not in the other Pharmacopœias.)

SEVUM PRÆPARATUM.

PREPARED SUET.

The internal fat of the abdomen of the sheep, *Ovis Aries*, purified by melting and straining.

Fusible at 103° F. (39·4° C).—*Brit. Pharm.*

NOTE.—We found that two pieces of mutton suet taken from different animals, when tried by the method given in the B. P. for taking melting points, fused at 119° F. and 120·5° F.

Soluble in boiling Alcohol; a portion of it separates on cooling.

Contained in Emplastrum Cantharidis, Unguentum Hydrargyri.

(Austr. and Ger. Sebum ovile; Belg. Sebum; Dan. Sevum ovillum; Fr. Suif de Mouton; U.S. Sevum; not in Russ.)

Not Official.

SIMABA CEDRON SEEDS.

The bruised seeds used for snakes' bites and hydrophobia.—*Lond. Med. Record*, 1885, p. 144.

Not Official.

SIMARUBA.

BITTER SIMARUBA, OR MOUNTAIN DAMSON.

The root bark of *Simaruba officinalis*, from the West Indies.

Medicinal Properties.—A bitter tonic. In large doses causes nausea; is diaphoretic and diuretic. Principally used in the asthenic and chronic form of dysentery; may be combined with Opium in epidemic dysentery, and in the advanced stages of diarrhœa.

Dose.—15 to 30 grs.

INFUSUM.—Simaruba, bruised, 3 drms.; boiling Water, 1 pint: infuse two hours. and strain. =(1 in 53).

(Fr. Tisane, 1 in 200; not in the others.)

Dose.—1 to 2 oz.

This infusion does not tinge the preparations of Iron.

SINAPIS.

MUSTARD.

The dried ripe seeds of *Brassica nigra* and *B. alba* reduced to powder, mixed.

Test.—A decoction cooled is not made blue by Tincture of Iodine—indicating absence of Starch.

Medicinal Properties.

Powerfully stimulant; swallowed whole as a laxative. The powder as an emetic, or as a rubefacient.

(In all the Pharmacopœias.)

Preparations.

CATAPLASMA SINAPIS. [MODIFIED.]

Mustard, in powder, 2½; Linseed Meal, 2½; boiling Water and Water, a sufficiency: mix the Linseed Meal with 6 to 8 oz. of boiling Water, and add the Mustard, previously mixed with 2 to 3 oz. of lukewarm Water, and stir them together.

The manipulation is modified.

Used as a counter-irritant in inflammation, neuralgic pains; also in spasms.

(Dan. Unguentum Sinapinum, and Fr. Cataplasme Rubéfiant, with Mustard only; not in the others.)

CHARTA SINAPIS.

Mustard, in powder	1 oz.
Solution of Gutta-percha	2 oz., or a sufficiency.

Mix the mustard with the gutta-percha solution so as to form a semi-fluid mixture, and having poured this into a shallow flat-bottomed vessel, such as a dinner-plate, pass strips of cartridge-paper over its surface so that one side of the paper shall receive a thin coating of the mixture. Then lay the paper on a table with the coated side upwards, and let it remain exposed to the air until the coating has hardened.

Before being applied to the skin, let the mustard paper be immersed for a few seconds in tepid water.

LINIMENTUM SINAPIS COMPOSITUM. Intense green.

Oil of Mustard, 1 drm.; Ethereal Extract of Mezereon, 40 grs.; Camphor, 120 grs.; Castor Oil, 5 drms.; Rectified Spirit, 32 drms.: dissolve. =(1 in 40).

A stimulating liniment.

(Spiritus Sinapis, Austr., Oil 1, Spirit 50; Belg., Essence Sinapis, 1; Alcohol (80°), 50; Ger., Oil 1, Spirit 49; Russ., Oil 1, Spirit 24; U.S. similar to Brit. Ph.; all by weight.)

OLEUM SINAPIS. Yellow, having a pungent odour.

The Oil distilled with water from the seeds of Black Mustard, *Brassica Nigra,* after the expression of the fixed oil.

Sp. g. 1·015—1·020. Boiling point about 290° F. (147·8° C.)

Solubility: 1 in 50 of water; readily in Rectified Spirit and Ether. Applied to the skin, it produces almost instant vesication.

(Austr. Oleum Sinapis Æthereum; Belg. Essentia Sinapis; Dan. Ætheroleum Sinapis; Ger. and Russ. Oleum Sinapis; U.S. Oleum Sinapis Volatile; not in Fr.)

Not Official.

INFUSION (2 drms. of Mustard to 4 oz. boiling Water) cures hiccough.

CHARTA SINAPIS. U.S.

Percolate Black Mustard, in No. 60 powder, with Benzin until the percolate ceases to produce a permanent greasy stain upon blotting paper. Remove and dry the powder by exposure to air: then mix it with as much Solution of Gutta Percha as will give it a semi-liquid consistence, and let it be spread with a suitable brush on one side of a stiff piece of well-sized paper, and allow it to dry. Each square inch of paper should contain about 6 grs. of Mustard.

Before applying it to the skin it should be dipped in warm water for 15 seconds.

The Solution of Gutta Percha is made thus:—Steep thin Gutta Percha, 9 in 70 by weight of Chloroform until dissolved; mix Carbonate of Lead in fine powder 10, with 21 by weight of Chloroform, add this to the solution and shake at intervals for half an hour, and let it stand until the insoluble matters have subsided, then pour off the clear liquid for use.

SODIUM.

SODIUM.

Na, eq. 23.

[NEW.]

Sp. g. 0·97. The metal of the alkali Soda, discovered by Sir Humphrey Davy in 1807, is a soft, malleable, sectile solid, of a silver-white colour, possessing a high degree of metallic lustre, which quickly tarnishes on exposure to the air. Like Potassium, it has a strong affinity for Oxygen: when thrown on cold water, it instantly fuses to a globule, without combustion, and traverses the surface in all directions; on hot water, however, combustion of the Hydrogen ensues.

It should be preserved in well-stoppered bottles under mineral naphtha.

Test.—23 grs., cautiously dissolved in Water, requires for neutralisation at least 975 grain-measures of the volumetric solution of Oxalic Acid.

Preparation.

LIQUOR SODII ETHYLATIS. *See* SODII ETHYLATIS LIQUOR.

The above is the only direct official preparation of Sodium. The Chloride of Sodium is obtained by dissolving Rock Salt in water, and recrystallizing it; some, however, absolutely pure and perfectly white, is found imbedded in the common brown Rock Salt.

From the Chloride of Sodium the Carbonate of Sodium is now prepared, from the latter of which all the other preparations are made.

The following are the preparations of Sodium given in the British Pharmacopœia:—

	Dose.
SODA CAUSTICA	
SODA TARTARATA	1 to 4 drms.
SODÆ CHLORINATÆ LIQUOR	10 to 20 minims.
SODÆ EFFERVESCENS LIQUOR	4 to 8 oz.
SODÆ LIQUOR. *See* SODA CAUSTICA	$\frac{1}{2}$ to 1 drm.
SODII ACETAS.	
SODII ARSENIAS	$\frac{1}{16}$ to $\frac{1}{8}$ gr.
SODII ARSENIATIS LIQUOR	5 to 10 minims.
SODII BIBORAS. *See* BORAX.	
SODII BICARBONAS	10 to 30 grs.
SODII BROMIDUM	10 to 30 grs.
SODII CARBONAS	5 to 30 grs.
SODII CARBONAS EXSICCATA	3 to 10 grs.
SODII CHLORIDUM	10 to 60 grs.

	Dose.
SODII CITRO-TARTRAS EFFERVESCENS	1 to 2 drms.
SODII ETHYLATIS LIQUOR.	
SODII HYPOPHOSPHIS	5 to 10 grs.
SODII IODIDUM	3 to 10 grs.
SODII NITRAS.	
SODII PHOSPHAS	¼ to 1 oz.
SODII SALICYLAS	10 to 30 grs.
SODII SULPHAS	¼ to 1 oz.
SODII SULPHIS	5 to 20 grs.
SODII SULPHOCARBOLAS	10 to 15 grs.
SODII VALERIANAS	1 to 5 grs.

Preparations of Sodium not official are to be found in the Index.

SODA CAUSTICA.

CAUSTIC SODA.

Hydrate of Sodium, **NaHO**, eq. 40, with some impurities.

In hard, greyish-white fragments, very alkaline and corrosive.

Procured by boiling down solution of Soda rapidly in a silver or clean iron vessel until there remains a fluid of oily consistence, a drop of which, when removed on a warmed glass rod, solidifies on cooling. Pour the fluid on a clean silver or iron plate, or into moulds, and as soon as it has solidified break it in pieces.

Solubility: 1 in 1 of Water; about 1 in 5 of Rectified Spirit.

Tests.—Its aqueous solution acidulated with Nitric Acid gives only scanty white precipitates with Nitrate of Silver and Chloride of Barium, limit of Chlorides and Sulphates. 40 grains dissolved in water leave scarcely any sediment, and require for neutralization about 900 grain-measures of the volumetric solution of Oxalic Acid.

(Belg. Soda Caustica Fusa; Fr. Soude Caustique; U.S. Soda; not in Austr. Dan. Ger. or Russ.)

Preparation.

LIQUOR SODÆ. Colourless. [MODIFIED.]

Carbonate of Sodium, 7; Slaked Lime, washed, 3; Distilled Water, 40: dissolve the carbonate in the water, boil in a clean iron vessel, gradually mix in the washed lime, and continue boiling for ten minutes, stirring constantly; allow the insoluble matter to subside and decant into a green glass bottle, with air-tight stopper, and add Distilled Water, if necessary, to make it correspond with the tests of sp. g. and neutralizing power.

NOTE.—The washed Lime is obtained from about 13 oz. of Slaked Lime, washed with Distilled Water (to get rid of the Chloride), until a little of the washings, acidified with Nitric Acid, gives no cloudiness with Nitrate of Silver.

Tests.—Sp. g. 1·047. 1 fluid ounce (458 grains by weight) requires for neutralization 470 grain-measures of the volumetric solution of Oxalic Acid. It does not effervesce when added to an excess of diluted Hydrochloric Acid: mixed with an equal volume of Distilled Water it gives no precipitate with Solution of Lime or Oxalate of Ammonium —indicating absence of Carbonic Acid and Lime. When it is heated with an excess of diluted Nitric Acid, and evaporated to dryness, the residue forms with water a clear solution, which is rendered only slightly turbid by Chloride of Barium and by Nitrate of Silver, and not at all by Ammonia—indicating a trace of Sulphates and Chlorides and absence of Magnesia.

100 grs. contain 4·1 grs. Hydrate of Sodium=18·8 grs. to 1 oz. of Solution.

Medicinal Properties.

Antacid, used in preference to Potash in some diseases of the stomach.

Dose.—½ to 1 drm.

(Belg. Soda Caustica Soluta, sp. g. 1·330 to 1·334; Fr. Soude-Caustique Liquide, sp. g. 1·332; Dan. Solut. Hydratis Natrici, sp. g. 1·215—1·219, containing 20 per cent.; Ger. Liquor Natri Caustici, sp. g. 1·159 to 1·163, containing nearly 15 per cent. of Hydrate of Sodium; Russ. Natrum Causticum Solutum, sp. g. 1·330; U.S. Liquor Sodæ, sp. g. 1·059, containing about 5 per cent. of Hydrate of Sodium.)

ANTIDOTES.—Same as Liquor Potassæ, p. 272.

SODA TARTARATA.

TARTARATED SODA.

Syn. TARTRATE OF SODA AND POTASH. ROCHELLE SALT.

$NaKC_4H_4O_6 . 4H_2O$, eq. 282.

In colourless transparent prisms, or halves of prisms of the right-rhombic order, generally eight-sided.

Solubility: 1 in 1½ of Water; soluble in its own water of crystallization when hot; insoluble in Rectified Spirit.

Test.—Entirely soluble in cold water. 141 grains, heated to redness till gases cease to be evolved, leave an alkaline residue (Carbonates), which requires for neutralization 990 grain-measures of the volumetric solution of Oxalic Acid.

Medicinal Properties.

A mild, cooling purgative, well suited to delicate and irritable stomachs. It is not aperient in small doses, its action being to render the urine alkaline.

A feeble hepatic, but a powerful intestinal stimulant.—Dr. Rutherford.

Dose.—2 to 4 drms.

(Austr. Kalium Natro-tartaricum; Belg. Tartras Sodico-Potassicus; Dan. Tartras Natrico-Kalicus; Fr. Tartrate de Potasse et de Soude; Ger. Tartarus Natronatus; Russ. Natro-Kali Tartaricum (Sal Polychrestum Seignetti); U.S. Potassii et Sodii Tartras.)

Not Official.

SEIDLITZ POWDER.—Rochelle Salt, 2 drms.; Bicarbonate of Sodium, 40 grs.: mix. In a separate powder, 37 grains of Tartaric Acid.

SODÆ CHLORINATÆ LIQUOR.

SOLUTION OF CHLORINATED SODA.

[ALTERED.]

Chlorinated Lime, 16; Carbonate of Sodium, 24; Distilled Water, 160; dissolve the Carbonate of Sodium in 40 of the water, thoroughly triturate the Chlorinated Lime with 120 of the water, and filter; well mix the solutions and filter. Keep the solution in a stoppered bottle in a cool and dark place.

A colourless alkaline liquid containing about 2½ per cent. of available Chlorine.

The strength is the same but the process very much altered and improved.

Tests.—Sp. g. 1·054. 70 grains by weight added to a solution of 20 grains of Iodide of Potassium in 4 ounces of water, and acidulated with 2 drachms of Hydrochloric Acid, requires for the discharge of the brown colour which the mixture assumes, 500 grain-measures of the volumetric solution of Hyposulphite of Sodium. It yields only a slight precipitate with Oxalate of Ammonium—indicating only a trace of Lime.

Test explained under Calx Chlorinata, p. 95.

(Belg. (Hypochloris Sodii Liquidus) Hypochlorite of Calcium 22, Carbonate of Sodium 44, Water 1000; Fr. (Hypochlorite de Soude liquide), having 1 Chlorinated Lime, 2 Carbonate of Sodium, Water 45; Russ. (Natrum Hypochlorosum Solutum), Hypochlorite of Calcium 25, Carbonate of Sodium 30, Water about 450; U.S. Chlorinated Lime 80, Carbonate of Sodium 100; Water to make 1000; not in Austr. Dan. or Ger.)

Medicinal Properties.

Stimulant, antiseptic, and resolvent. Used internally in typhus, scarlatina, etc., indicated by great prostration of strength, fœtid evacuations, dry and furred tongue; in dysentery, dyspepsia, and in glandular enlargements, and chronic mucous discharges. Locally, in all affections attended with fœtor, and may be applied, diluted, as a wash, poultice, or by lint; 4 to 6 drms. in 12 oz. of water for a gargle. An excellent application to sore nipples. It is also a powerful disinfecting agent.

Dose.—10 to 20 minims.

Preparation.

CATAPLASMA SODÆ CHLORINATÆ (CHLORINE POULTICE.)

Solution of Chlorinated Soda, 1; Linseed Meal, 2; boiling Water, 4: add the Linseed Meal gradually to the water, stirring constantly, then mix in the solution of Chlorinated Soda.

(Not in the other Pharmacopœias.)

Not Official.

SODII ACETAS.

ACETATE OF SODIUM.

$NaC_2H_3O_2.3H_2O$, eq. 136. Colourless.

Solubility: 1 in 1 of Water; 1 in 30 of Rectified Spirit.

Used in the preparation of Acetic Ether.

SODII ARSENIAS.

ARSENIATE OF SODIUM.

$Na_2HAsO_4, 12H_2O$, eq. 402, and $Na_2HAsO_4, 7H_2O$, eq. 312.

In colourless transparent prisms.

When freshly crystallized it has the composition $Na_2HAsO_4, 12H_2O$. On exposure to air moisture escapes, and the effloresced salt has the formula $Na_2HAsO_4, 7H_2O$.

Solubility: 1 in 2½ of Water; soluble in its own water of crystallization when hot.

Tests.—Its aqueous solution is alkaline; it precipitates white with Chloride of Barium, Chloride of Calcium, and Sulphate of Zinc, and brick-red with Nitrate of Silver, all soluble in Nitric Acid. 12·4 grains of Anhydrous Arseniate of Sodium (dried at 300° F., 148·9° C.) dissolved in Water, and acidulated with Acetic Acid, requires not less than 34 grains of Acetate of Lead for complete precipitation.

6·6 grs. of the crystals yield 4 grains of Anhydrous Salt.

Dose.—$\frac{1}{16}$ to $\frac{1}{8}$ grain.

(Belg. dried Salt; Fr. and U.S. crystallized: not in the others.)

Medicinal Properties.

Similar to those of the Arsenite of Potassium, or Fowler's Solution. Used in skin and nervous diseases. It cures eczema more speedily than Liquor Arsenicalis, producing less gastric disturbance and less irritability of the conjunctiva.

Preparation.

LIQUOR SODII ARSENIATIS. Colourless. [ALTERED.]

Arseniate of Sodium rendered anhydrous by a heat not exceeding 300° F. (148·9° C.), 9 grs.; Distilled Water, 2 oz.: dissolve. =(1 in 100).

Strength now increased to 1 gr. in 100 grain-measures or 1 gr. in 106$\frac{2}{3}$ minims.

It is of about half the strength of Liquor Arsenicalis.

Dose.—5 to 10 minims, carefully increased.

(U.S. same as Brit.; Belg. and Fr. crystallized Arseniate of Sodium 1 in 600. Pearson's Solution.)

ANTIDOTES. *See* ACIDUM ARSENIOSUM, page 5.

Not Official.

SODII BENZOAS.

$NaC_7H_5O_2$, H_2O, eq. 162.

A white semi-crystalline or amorphous powder.

Soluble 1 in 2 of Water; 1 in 35 of Rectified Spirit.

Its aqueous solution gives with Solution of Ferric Sulphate a flesh-coloured precipitate.

(Belg. Benzoas Sodicus; Fr. Benzoate de Soude; Ger. and Russ. Natrium Benzoicum; U.S. Sodii Benzoas; not in Austr. or Dan.)

Medicinal Properties.

Useful in rheumatism and gout; also given with good effect in all febrile diseases of an infectious character, and is said to be certain and permanent, leaving no unpleasant or after effects from long use, and 380 grains daily were given.

Dose.—10 to 30 grs., or in Vesical Catarrh and Tuberculosis 150 to 230 grs.

It is also employed as a prophylactic.

Is a powerful hepatic stimulant; it is not an intestinal stimulant.—Dr. Rutherford.

SODII BICARBONAS.

BICARBONATE OF SODIUM.

Syn. SODÆ SESQUICARBONAS, Ph. L., 1836.

$NaHCO_3$, eq. 84.

A white powder, or small opaque irregular scales.

Solubility: 1 in 12 of Water; insoluble in Rectified Spirit.

Tests.—When supersaturated with Nitric Acid, its solution scarcely precipitates with Chloride of Barium or Nitrate of Silver—indicating a mere trace of Sulphate and Chloride. 84 grains, exposed to a red heat, leave 53 grains of alkaline residue (Carbonate), which requires for neutralization 1000 grain-measures of the volumetric solution of Oxalic Acid.

Medicinal Properties.

Analogous to those of the Bicarbonate of Potassium; it is less caustic and irritating than Carbonate of Sodium. Employed as an antacid in dyspepsia. Useful in calculus with excess of Uric Acid; the Bicarbonate of Potassium, however, is preferable, as it forms soluble salts with Uric Acid. It is a resolvent or alterative in some forms of inflammations, glandular affections, syphilis, and scrofula, and a diuretic in dropsy. Moistened with water, is an excellent application to the sting of wasps and gnats.

Has scarcely any appreciable effect as a stimulant of the liver, even when given in large doses.—Dr. Rutherford.

Dose.—10 to 30 grs.

(In all the Pharmacopœias; Dan. Bicarbonas Natricus; Fr. Bicarbonate de Soude; Austr. Ger. and Russ. Natrum Bicarbonicum; Belg. Bicarbonas Sodæ.)

Preparations.

TROCHISCI SODII BICARBONATIS. White.

Lozenges made with Bicarbonate of Sodium, Sugar, Gum Acacia, and Water.

Each lozenge contains 5 grains of Bicarbonate of Sodium.

Dose.—1 to 6 lozenges.

(Belg. Fr. and U.S.; not in Austr. Dan. Ger. or Russ.)

Not Official.

PULVIS SALINUS ANTICHOLERICUS (Dr. Stevens).—Bicarbonate of Sodium, 30 grs. Chloride of Sodium, 20 grs.; Chlorate of Potassium, 7 grs.: for one dose.

Given frequently in a small tumbler of cold water, to arrest the pain and purging.

PESSARY (Antacid).—Bicarbonate of Sodium, 15 grs.; Oil of Theobroma sufficient for one pessary.

Brockedon's compressed pellets, taken for heartburn.

Bicarbonate of Sodium and Tartaric Acid when well dried do not act on each other, if well corked will remain good for years. Fifty years ago they were flavoured with Essence of Lemon and sold as Lemon and Kali, they are now sold under various names (without lemon), and are much used in hot climates as a cooling and refreshing medicine.

LIQUOR SODÆ EFFERVESCENS.

Syn. SODA WATER. Colourless.

Bicarbonate of Sodium, 30 grs.; Water, 20 oz.: dissolve and filter, and pass into it as much washed Carbonic Acid Gas (obtained by the action of Sulphuric Acid on Chalk) as can be introduced by the pressure of four atmospheres; bottle, and secure the corks with wire.

Each half-pint bottle contains about 15 grains.

Test.—Ten fluid ounces, after being boiled for five minutes, require for neutralization 178 grain-measures of the volumetric solution of Oxalic Acid.

SODII BROMIDUM.

BROMIDE OF SODIUM.

$NaBr$, eq. 103.

A granular white powder, somewhat deliquescent.

Now included in B. P.; was a Not Official in Companion 1880.

Solubility: 5 in 6 of Water; 1 in 16 Rectified Spirit.

Tests.—When its aqueous solution is mixed with a little Chlorine Water, and shaken with Chloroform, the latter on falling to the bottom exhibits a red colour. If Bisulphide of Carbon be poured into a solution of the Salt, then Chlorine Water be added drop by drop and the whole agitated, the Bisulphide will acquire a yellow or yellowish-brown colour without a violet tint. The aqueous solution mixed with Mucilage of Starch and a drop of Chlorine Water or Bromine Water should not exhibit a blue colour. 10 grs. of the dry Salt requires for complete decomposition about 960 grain-measures of the volumetric solution of Nitrate of Silver.

(Fr. Bromure de Sodium; Ger and Russ. Natrium Bromatum; U.S. Sodii Bromidum; not in Austr. Belg. or Dan.)

Medicinal Properties.

Similar to Bromide of Potassium, but not so powerful and less depressant.

Dose.—10 to 30 grs.

It has been recommended as a remedy for sea sickness in 60 grain doses three times a day for at least two days before embarkation on a long voyage, the dose being reduced to half when on board.—*B. M. Jl.* Oct. 29, 1881, p. 730.

SODII CARBONAS.

CARBONATE OF SODIUM.

$Na_2CO_3 . 10H_2O$, eq. 286.

In transparent, colourless, laminar crystals of a rhombic shape, containing 63 per cent. of water of crystallization, which can be driven off by heat; efflorescent; it has a strong alkaline reaction.

Solubility, 5 in 8 of Water; 12 in 1 of Water at 100° F.; 5 in 1 of boiling Water; insoluble in Rectified Spirit.

Tests.—When supersaturated with Nitric Acid it precipitates only slightly with Chloride of Barium or Nitrate of Silver—indicating merely a trace of Sulphate and Chloride. 143 grains require for neutralization at least 960 grain-measures of the volumetric solution of Oxalic Acid.

Medicinal Properties.

Antacid, antilithic, and resolvent. Given principally in diseases attended with acidity of the stomach, as gout and dyspepsia.

Dose.—10 to 30 grs. in any bitter infusion.

(In all the Pharmacopœias.)

Preparation.

SODII CARBONAS EXSICCATA. $Na_2 CC_3$, eq. 106. White.

Expose the Carbonate of Sodium in a porcelain capsule to a heat applied gently until the crystals crumble to powder; then increase the temperature and continue the action until vapours cease to be evolved. Reduce to powder and keep it in a well-closed vessel.

53 grains are equal to 143 grains of crystallized salt.

Dose.—3 to 10 grains three times daily in pill, with soap and aromatics.

(In all the Pharmacopœias except Fr.)

Balneum Alkalinum.—Crystals of Carbonate of Sodium, 8 or 10 oz. to 60 gallons of Water.

Used in skin diseases as a more effective means of cleansing than by soap.

SODII CHLORIDUM.

CHLORIDE OF SODIUM. COMMON SALT.

NaCl, eq, 58·5.

In small, white, crystalline grains, or transparent cubic crystals.

Solubility of pure Rock Salt, 1 in 2¾ of Water; 1 in 2¾ of boiling Water; 1 in 200 of Rectified Spirit.

Test.—Free from moisture.

The solution of Pure Rock Salt is not rendered hazy by Chloride of Barium nor by Phosphate of Sodium after the addition of a mixed solution of Ammonia and Chloride of Ammonium. The addition of Solution of Ammonia and Chloride of Ammonium is to produce with Magnesia, if it be present, Ammonio-phosphate of Magnesium.

Medicinal Properties.

In small doses, stimulant, tonic, and anthelmintic; in larger doses, purgative and emetic. It is also antiperiodic in doses of 8 or 12 drachms during the intervals. Locally, as a fomentation to sprains and bruises. As a salt water bath (1 pound to 4 gallons), a tonic and excitant of the system, especially in children. A saturated solution forced up the nostrils with a syringe is most effective in removing the fœtid odour from diseased frontal sinuses. A recent cold is greatly relieved by washing the nostrils and gargling the throat with a weak solution of Salt. In case of a leech being swallowed drink a strong solution of Salt.

Its value as a condiment is well known; animals as well as ourselves require it. Soldiers are supplied with it; our army ·5 (=½ oz.) daily; the French, ·5; Prussian, ·87; Russian, 1·86; but for a long time the Russian army had salt-money given, and it was only when scurvy attacked them that the money was stopped and the salt given.

The American travellers carry a bag of salt and a knife, and when bitten by snakes, the wound is scraped, salt applied, and the traveller proceeds.

Its antiseptic properties are proverbial; it is used as a dentifrice on that account. Given with Carbonate of Sodium and Chlorate of Potassium by Dr. Stevens in all stages of Cholera, and is also effectual in common Diarrhœa, p. 320.

A very feeble hepatic stimulant.—Dr. Rutherford.

Dose.—10 to 60 grs. as a tonic: 120 to 240 grs. as a cathartic.

(Belg. Fr. Russ. and U.S.; not in Austr. Dan. or Ger.)

SODII CITRO-TARTRAS EFFERVESCENS.

EFFERVESCENT CITRO-TARTRATE OF SODIUM.

[ALTERED.]

Bicarbonate of Sodium, in powder, 17; Tartaric Acid, in powder, 9; Citric Acid, in powder, 6; Refined Sugar, 5: mix the powders thoroughly, place them in a dish or pan of a suitable form heated to between 200° and 220° F. (93·3° and 104·40° C.), and when the particles of the powder begin to aggregate, turn them assiduously until they assume a granular form, then by means of suitable sieves separate the granules of uniform and most convenient size, and preserve them in well-closed bottles. White, and in grains.

Now contains Sugar.

Dose.—60 to 120 grs.

SODII ETHYLATIS LIQUOR.

SOLUTION OF ETHYLATE OF SODIUM.

[NEW.]

Metallic Sodium, free from Oxide, 1; Ethylic Alcohol, 20: dissolve the Sodium in the Ethylic Alcohol contained in a flask, the latter being kept cool in a stream of cold Water. The solution should be recently prepared.

A colourless syrupy liquid. Sp. g. ·867.

(Not in the other Pharmacopœias.)

Medicinal Properties.

Has been used as a caustic in the treatment of Nævus.—*Lancet*, Nov., 1878, p. 625.

SODII HYPOPHOSPHIS.

HYPOPHOSPHITE OF SODIUM.

$NaPH_2O_2$, eq. 88.

Obtained by adding Carbonate of Sodium to solution of Hypophosphite of Calcium so long as a precipitate of Carbonate of Calcium is formed, then filtering the solution and evaporating it to dryness by the heat of a steam-bath, keeping it constantly stirred when the salt begins to solidify.

A white granular salt having a bitter nauseous taste.

Solubility: 1 in 1 of Water; 1 in 2 of Glycerine; almost entirely 1 in 20 of Rectified Spirit.

Tests.—Its solution does not effervesce with acids (absence of Carbonate), gives no precipitate with Acetate of Lead (absence of Phosphate), and only a slight cloudiness with Oxalate of Ammonium (trace of Calcium). 5 grains dissolved in ½ ounce of Distilled Water, and the solution boiled for ten minutes with 11½ grains of Permanganate of Potassium and filtered, should afford a nearly colourless solution.

At a red heat it ignites, emitting spontaneously inflammable phosphuretted hydrogen.

Dose.—5 to 10 grains as a nervine tonic.

(U.S.; Belg. Hypophosphis Sodii; Fr. Hypophosphite de Soude; Russ. Natrum Hypophosphorosum; not in Austr. Dan. or Ger.)

SODÆ HYPOPHOSPHITIS SOLUTIO.—Swan's Solution is 3 grs. to the drachm.

Not Official.

SODII HYPOSULPHIS.

HYPOSULPHITE OF SODIUM.

$Na_2S_2O_3$, $5H_2O$, eq. 248.

Prepared by digesting a solution of Sulphite of Sodium with Sulphur, or by passing Sulphurous Acid gas through a solution of Sulphide of Sodium.

It crystallizes in prisms, which have a bitter saline taste, inodorous.

Solubility, 16 in 10 of water; insoluble in Rectified Spirit.

(Fr. Hyposulfite de Soude; Russ. Natrum Hyposulfurosum; Belg. and U.S.; not in Austr. Dan. or Ger.)

Medicinal Properties.

It is given for sarcina ventriculi, also in scrofulous, syphilitic, and rheumatic affections, sometimes used as a lotion for parasitic skin diseases (1 oz. to a gallon of water).

Dose.—10 to 60 grs.

5 lbs. of the salt dissolved in 100 gallons of water was recommended for the ordinary drink for cattle as a preventive to Cattle Plague.

SODII IODIDUM.

IODIDE OF SODIUM.

NaI, eq. 150.

[NEW.]

A dry white crystalline deliquescent powder.

Now included in B. P.; was a Not Official in Companion 1869.

Solubility: 11 in 6 of Water; 1 in 3 of Rectified Spirit; 1 in 1 of Glycerine.

Tests.—The aqueous solution does not exhibit a blue colour with solution of Tartaric Acid and Mucilage of Starch (absence of Iodate), and gives only a slight precipitate on the addition of Saccharated Solution of Lime (trace of Carbonate). Solution of Nitrate of Silver added in excess affords a yellowish-white precipitate, which when shaken with diluted Solution of Ammonia yields by subsidence a clear liquid in which excess of Nitric Acid causes very little turbidity (trace of Chloride). 10 grs. require for complete precipitation about 660 grain-measures of the volumetric solution of Nitrate of Silver.

(Fr. Iodure de Sodium; Ger. and Russ. Natrium Iodatum; U.S. Sodii Iodidum; not in Austr. Belg. or Dan.)

Medicinal Properties.

Given in the same doses and for similar purposes as the Iodide of Potassium.

Dose.—3 to 10 grs.

SODII NITRAS.

NITRATE OF SODIUM.

$NaNO_3$, eq. 85.

A native salt, purified by crystallization from water. Colourless. Soluble 9 in 10 of Water.

Used only to prepare Sodii Arsenias.

(Belg. Nitras Sodæ; Ger. and Russ. Natrum Nitricum; U.S.; not in Austr. Dan. or Fr)

Not Official.

SODII NITRIS PURUS.

PURE NITRITE OF SODIUM.

Colourless, deliquescent, crystals.

Solubility: 5 in 6 of Water, 1 in 50 of Rectified Spirit.

Tests.—10 grs. dissolved in ½ oz. of Distilled Water and acidulated with 5 fl. drms. of Diluted Sulphuric Acid, should yield a colourless solution after 2 minutes when mixed with 8·7 grs. of Permanganate of Potassium dissolved in Water,—indicating at least 95 per cent. of Nitrite of Sodium.

Medicinal Properties.

Has been used in Angina Pectoris.—*Lancet*, Nov., 1883, pp. 766 and 880.

Dose.—2 or 3 grains.

SODII ET POTASSII TARTRAS. *See* SODA TARTARATA, p. 317.

SODII PHOSPHAS.

PHOSPHATE OF SODIUM.

$\mathbf{Na_2HPO_4.\ 12H_2O}$, eq. 358.

In transparent, colourless, rhombic prisms, terminating by four converging planes, efflorescent, tasting like common salt.

Solubility, 1 in 6 of water; dissolves in its own water of crystallization at 212° F.; insoluble in Rectified Spirit.

Test.—Heated to dull redness it loses 63 per cent. of its weight, leaving a residue, which, when dissolved in water, gives, with Chloride of Barium, a precipitate almost entirely soluble in diluted Nitric Acid.

Medicinal Properties.

A mild purgative; from its pure saline taste it is called tasteless Aperient Salt; it is well suited to children and persons of delicate stomach. Diuretic in small doses.

Dose.—¼ to 1 oz.

(Belg. Phosphas Sodæ; Dan. Phosphas Natricus; Fr. Phosphate de Soude; Austr. Ger. and Russ. Natrum Phosphoricum; U.S.)

Best given in gruel or weak broth.

SODII SALICYLAS.

SALICYLATE OF SODIUM.

$\mathbf{(NaC_7H_5O_3)_2,\ H_2O}$, eq. 338.)

[NEW.]

Obtained by the action of Salicylic Acid on Carbonate of Sodium or on Caustic Soda.

Now included in B. P.; was a Not Official in Companion 1877.

Small colourless or nearly colourless crystalline scales.

Solubility: 1 in 1 of Water; 1 in 5 of Rectified Spirit; 1 in 30 of Absolute Alcohol.

Tests.—If the aqueous solution be acidulated by Nitric Acid, and the precipitate be dissolved by Rectified Spirit, the mixture is not rendered more than faintly opalescent by Chloride of Barium or Nitrate of Silver (only traces of Sulphate and Chloride); Perchloride of Iron colours a concentrated solution reddish-brown, and a dilute solution violet.

(Belg. Salicylas Sodæ ; Ger. and Russ. Natrium Salicylicum ; Fr. Salicylate de Soude ; U.S. ; not in Austr. or Dan.)

Medicinal Properties.

Given for the same purposes as Salicylic Acid, but it is less irritating, and being soluble is more rapidly absorbed.

Given in Rheumatism, *Lancet* and *Medical Times*, May 29, 1880 ; in Diabetes, *Lancet*, April 17, 1880.

Dose.—10 to 30 grs. twice or thrice a day.

That made from the natural acid is preferred.

It is a very powerful stimulant of the liver, but a very slight stimulant of the intestinal glands.—Dr. Rutherford.

SODII SULPHAS.

SULPHATE OF SODIUM.

Syn. GLAUBER SALT.

Na_2SO_4 $10H_2O$, eq. 322.

In colourless transparent oblique rhombic prisms, it effloresces on exposure to air.

Solubility: 1 in 3 of Water, and measures 3½ ; 10 in 3 of Water at 92° F. ; 10 in 4½ of Water at 212° F. ; insoluble in Rectified Spirit.

Test.—100 grains dissolved in Distilled Water acidulated with Hydrochloric Acid give, with Solution of Chloride of Barium, a white precipitate, which, when washed and dried, weighs 72·2 grains.

(In all the Pharmacopœias; Dan. Sulphas Natricus ; Ger. Natrum Sulphuricum.)

Medicinal Properties.

An excellent cooling aperient.

A moderately powerful stimulant of the liver, and a powerful stimulant of the intestine.—Dr. Rutherford.

Dose.—¼ to 1 oz.

100 Sulphate of Sodium exposed to heat in a crucible lose 55·9 of water.

SODII SULPHIS.

SULPHITE OF SODIUM.

Na_2SO_3, $7H_2O$, eq. 252.

[NEW.]

Obtained by the action of Sulphurous Acid on Carbonate of Sodium or on Caustic Soda.

Now included in B. P. ; was a Not Official in Companion 1866.

It crystallizes in white transparent prisms, which effloresce when exposed to the air.

Solubility : 3 in 4 of Water ; slightly in Rectified Spirit ; 1 in 25 of Glycerine.

Tests.—The aqueous solution has a neutral or faintly alkaline reaction, which on the addition of Hydrochloric Acid evolves a sulphurous vapour, but does not become cloudy; in this it differs from Hyposulphite, which deposits Sulphur.

(U.S.; not in the other Pharmacopœias.)

Medicinal Properties.

Given with success in cases of vomiting sarcina ventriculi.

Dose.—10 to 60 grs.

SODII SULPHOCARBOLAS.

SULPHOCARBOLATE OF SODIUM.

$NaC_6H_5SO_4, 2H_2O$, eq. 232.

[NEW.]

Obtained by dissolving Carbolic Acid in excess of Sulphuric Acid, supersaturating the liquid with Carbonate of Barium, and treating the filtrate with Carbonate of Sodium until no further precipitate forms, filter and evaporate so as to obtain crystals.

Now included in B. P.; was a Not Official in Companion 1869.

Colourless transparent rhombic prisms.

Solubility: 1 in 6 of Water; 1 in 150 of Rectified Spirit; 1 in 5½ of Glycerine.

Tests.—On ignition it gives vapours of Carbolic Acid and leaves a residue, the solution of which in Water affords a white precipitate with Chloride of Barium insoluble in Hydrochloric Acid. The dilute aqueous solution is rendered violet by solution of Perchloride of Iron; it should not at once be rendered turbid by Chloride of Barium.

(U.S.; not in the other Pharmacopœias.)

Dose.—10 to 15 grs.

Not Official.

SODII TAUROCHOLAS.

Prepared from ox-bile or pig's-bile.

Has been given in the treatment of gout, in doses of 4 grains at each meal immediately after food. The pills should be coated with Keratin.—*Lancet*, April, 1885, pp. 745, 917.

SODII VALERIANAS.

VALERIANATE OF SODIUM.

$NaC_5H_9O_2$, eq. 124.

In dry white masses without alkaline reaction.

Solubility: 1 in 2½ of Water; about 1 in 100 of Rectified Spirit.

Dose.—1 to 5 grs.

Used chiefly to prepare Valerianate of Zinc.

(Not in the other Pharmacopœias.)

SPIRITUS.

SPIRIT.

All substances which have undergone the vinous fermentation, and in which it is not completely over, contain Alcohol ready formed, which is separated by distillation. The various kinds are distinguished by varieties of flavour and colour. The redistillation of these produces Rectified Spirit.

When spirit is distilled with aromatic vegetables containing volatile oil, the oil rises for the most part with the spirituous vapour, and condenses along with it in a state of solution.

The Spirits of the British Pharmacopœia are as follows: the formulas will be found under the names of the drugs from which they are prepared:—

Dose.			Proportion of active ingredient to the whole.
30 mins.	SPIRITUS ÆTHERIS		1 in 3.
30 mins.	SPIRITUS ÆTHERIS COMPOSITUS.		
½ drm.	SPIRITUS ÆTHERIS NITROSI.		
30 mins.	SPIRITUS AMMONIÆ AROMATICUS.		
½ drm.	SPIRITUS AMMONIÆ FŒTIDUS.		
1 drm.	SPIRITUS ARMORACIÆ COMP		1 in 8.
30 mins.	SPIRITUS CAJUPUTI	(Oil)	1 in 50.
10 mins.	SPIRITUS CAMPHORÆ		1 in 10.
10 mins.	SPIRITUS CHLOROFORMI		1 in 20.
30 mins.	SPIRITUS CINNAMOMI		
30 mins.	SPIRITUS JUNIPERI	(Oil)	1 in 50.
30 mins.	SPIRITUS LAVANDULÆ	,,	1 in 50.
30 mins.	SPIRITUS MENTHÆ PIPERITÆ	,,	1 in 50.
30 mins.	SPIRITUS MYRISTICÆ	,,	1 in 50.
	SPIRITUS RECTIFICATUS (16 per cent. of water).		Sp. g. ·838.
12 mins.	SPIRITUS ROSMARINI	(Oil)	1 in 50.
	SPIRITUS TENUIOR (Rect. Sp. 5, Water 3).		Sp. g. ·920.
	SPIRITUS VINI GALLICI (containing 48 to 50 per cent. of Alcohol).		

SPIRITUS ÆTHERIS NITROSI.

SPIRIT OF NITROUS ÆTHER.

Syn. Spiritus Ætheris Nitrici, *Lond. Edin.*

A spirituous solution containing nitrous compounds, aldehyd, and other substances.

Nitric Acid, 3; Sulphuric Acid, 2; Copper, in fine wire (No. 25), 2; Rectified Spirit, a sufficiency: to 20 of the spirit add gradually the Sulphuric Acid, stirring them together; then add to this, also gradually, 2½ of the Nitric Acid. Put the mixture into a retort or other suitable apparatus, into which the copper wire has been introduced, and to which a thermometer is fitted. Attach now an efficient condenser, and applying a gentle heat, let the spirit distil at a temperature commencing at 170° F. (76·7° C.) and rising to 175° F. (79·4° C.) but not exceeding 180° F. (82·2° C.) until 12 have passed over and been collected in a bottle kept cool, if necessary, with ice-cold water; then withdraw the heat, and having allowed the contents of the retort to cool, introduce the remaining ½ of Nitric Acid, and resume the distillation as before, until the distilled product has been increased to 14. Mix this with 40 of the Rectified Spirit, or as much as will make the product correspond to the "Nitric Oxide Test." Preserve it in thoroughly well-closed vessels.

A transparent inflammable liquid. Sp. g. ·840—·845.

Nearly colourless, with a very slight tinge of yellow, with peculiar penetrating apple-like odour, and sweetish, cooling, sharp taste.

Tests.—It effervesces feebly or not at all when shaken with a little Bicarbonate of Sodium When agitated in a test-tube, with strong solution of Sulphate of Iron, and if a few drops of Sulphuric Acid are then poured down the side of the tube, a deep olive-brown or black zone is produced. Tested as described in the *Pharmaceutical Journal*, 3rd series, vol. xiii. p. 63, Eykman's test; or vol. xv. p 101, Dymond's modification of Eykman (both are processes for the measurement of the volume of Nitric Oxide given off when the Spirit of Nitrous Ether is heated with an acid solution of Ferrous Sulphate), or vol. xv. p 673; Allen's test, it should yield at the ordinary temperature (60° F., 15·5° C.) and pressure (30 inches or 760 millimetres of Mercury), and when freshly prepared, seven times its volume of Nitric Oxide gas; and even after it has been kept some time and the vessel containing it has occasionally been opened, it should yield not much less than five times its volume of the gas.

Allen's method consists in treating the sample with an acidulated solution of Iodide of Potassium, and measuring the Nitric Oxide liberated. Fill a nitrometer with strong brine, and then introduce 5 c.c. of the Spirit of Nitrous Ether; then allow 5 c.c. of a strong Solution of Iodide of Potassium to enter, followed by 5 c.c. of diluted Sulphuric Acid. Agitate briskly at intervals, after five minutes adjust the liquid in the two limbs of the nitrometer to the same level, and read off the volume of gas obtained. The British Pharmacopœia requires 35 c.c. or not much less than 25 c.c. from 5 c.c. of Spirit of Nitrous Ether.

To calculate the percentage of real Nitrite of Ethyl, the following data are required:—

1. The sp. g. of the sample examined.
2. 23·55 c.c. of Nitric Oxide, measured at *ordinary* pressure and temperature, weigh 0·03 grm.
3. 30 parts by weight of Nitric Oxide are equivalent to 75 parts by weight of Nitrite of Ethyl.

Medicinal Properties.

Stimulant, diaphoretic, and diuretic. Useful in dropsy and catarrh.

Dose.—½ to 2 fluid drms.

(Fr. Esprit de Nitre Dulcifié, a mixture of Nitric Acid 78, Alcohol 300, Water 22 all by weight: Belg. Æther Nitricus Alcoholicus, sp. g. ·850—·860; Dan. sp. g. ·838 to ·842; Ger. sp. g. ·840—·850; Russ. sp. g. ·840 to ·850; U.S. sp. g. ·823—·825.)

INCOMPATIBLES.—Iodide of Potassium, Sulphate of Iron, Tincture of Guaiacum, Gallic and Tannic Acids. Emulsions are curdled by its addition.

Not Official.

SPIRITUS FRUMENTI. U.S.Ph.

WHISKY.

An alcoholic liquid obtained from fermented grain by distillation, and containing from 50 to 58 per cent. by volume of Alcohol. It should be not less than 2 years old. Sp. g not above ·930 nor below ·917.

It has an amber colour, a distinctive odour and taste. If 100 c.c. be very slowly evaporated in a weighed capsule on a water bath, the last portions volatilized should not have a harsh or disagreeable odour (absence of more than traces of fousel oil from grain or potato spirit). The residue fully dried at 212° F. (100° C.) should weigh not more than ·250 gramme equivalent to ·25 per cent. (absence of undue amount of solids). This residue should have no sweet or distinctly spicy taste (absence of added Sugar, Glycerine, or Spices). It should nearly all dissolve in 10 c.c. of cold Water, forming a solution which is coloured light green by a dilute Solution of Ferric Chloride (traces of oak tannin from casks). 100 c.c. of Whisky should be rendered distinctly alkaline to Litmus by 2 c.c. of the volumetric Solution of Soda (absence of an undue amount of free acid).

SPIRITUS RECTIFICATUS.

RECTIFIED SPIRIT.

Alcohol, $\mathbf{C_2H_5HO}$, eq. 46, with 16 per cent. of water; obtained by the distillation of fermented saccharine fluids, and by the rectification of the product, if it be not of proper density.

Rectified Spirit dissolves Ammonia, Camphor, Balsams, Castor Oil, Iodine, Lithia, Mannite, Phosphorus, Potash (but not the Carbonate), Soda, Sulphur, Sugar, Tannic and Gallic Acids, and deliquescent salts.

When 18 measures of Rectified Spirit are mixed with 18 of water, the mixture condenses into 34 measures.

Tests.—Sp. g. 0·838. Burns with a blue flame without smoke. Remains clear when diluted with Distilled Water. Odour and Taste purely alcoholic. 4 ounces with 30 grain-measures of the volumetric solution of Nitrate of Silver, exposed for twenty-four hours to bright light and then decanted from the black powder which has formed, undergo no further change when again exposed to light with more of the test.

These tests are intended to discover the presence of Fousel Oil, and the quantity of it.

Medicinal Properties.

Internally a powerful diffusible stimulant. Used in some states of acute disease characterized by excessive debility. Externally applied diluted to produce cold by evaporation; when evaporation is repressed, it acts as a stimulant. 1 of Rectified Spirit and 2 of Camphor Water mixed is a good evaporating lotion. Diluted, it forms a lotion for erysipelas, erythema, burns and scalds while the cuticle is entire, and for sprains and recent bruises.

(In all the Pharmacopœias.)

Preparations.

SPIRITUS TENUIOR. PROOF SPIRIT.[*] Colourless.

Rectified Spirit, 5; Distilled Water, 3: mix.

Sp. g. 0·920.

It contains by weight about 49 per cent. and by volume about 57 per cent. of Absolute Alcohol.

SPIRITUS VINI GALLICI. French Brandy.

Spirit distilled from French wine. It has a peculiar flavour, and a light sherry colour derived from the cask in which it has been kept.

Sp. g. ·941. 100 parts contain 48 to 56 parts of Alcohol (by volume).

Pure diluted spirit does not affect the biliary secretion.—Dr. Rutherford.

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[*] When the sp. g. is ·920 it is called proof; if lighter than this, it is called above proof; if heavier than this, under proof; and the percentage of water, or of Rectified Spirit, by measure, sp. g. ·825, necessary to be added to any sample of spirit to bring it to the standard of proof spirit, indicates the number of degrees the given sample is above or below proof. Thus, if 100 volumes of a spirit require 10 volumes of water to reduce it to proof, it is said to be "10 over proof;" on the other hand, if 100 volumes of spirit require 10 volumes of spirit to raise it to proof, the sample is said to be "10 under proof."

MISTURA SPIRITUS VINI GALLICI.

French Brandy, 4 oz.; Cinnamon Water, 4 oz.; the Yolks of 2 Eggs; Sugar, ½ oz.: rub the Yolks and Sugar together, then add the Cinnamon Water and Brandy.

A delicious dose in cases of prostration or last stages of fever.

Dose.—1 to 2 oz.

Stimulant, restorative.

The Spirits of the Pharmacopœias are as follows:—

	Sp. g.	Percentage of Absolute Alcohol by Measure.	
British	·838	Spiritus Rectificatus	84*
,,	·920	,, Tenuior	57
Austrian	·8336	Sp. Vini Concentratus	90
,,	·892	,, Dilutus	70
Belgian	·794	Alcohol Anhydrus	
,,	·827	,, at 92°	92
Danish	·812—·815	Spiritus Alcoholisatus	95
,,	·830—·834	,, Concentratus	90
,,	·890—·894	,, Dilutus	70
,,	·940	,, Tenuis	45
French	·816	Alcohol at 95°	95
German	·830—·834	Spiritus	90
,,	·892—·896	,, Dilutus	69
Russian	·812—·816	Sp. Vini Alcoholisatus	95
,,	·830—·834	,, Rectificatissimus	90
,,	·887—·890	,, Rectificatus	70
,,	·951—·955	,, Dilutus	38
U.S.	·820	Alcohol	94
,,	·928	Alcohol Dilutum	53
,,	·925—·941	Sp. Vini Gallici	46 to 55
,,	·917—·930	Sp. Frumenti	50 to 58

Table of the Amount of absolute Alcohol by weight, or Proof-spirit (Brandy) by volume, in the following Wines, &c., from Dr. Christison's Experiments in 1838.

	Alc. by weight in 100 parts.	Proof-sp. by vol. in 100 parts.
Port, weakest	14·97	30·56
,, mean of 7 wines	16·20	33·91
,, strongest	17·10	37·27
White Port	14·97	31·31
Sherry, weakest	13·98	30·84
,, mean of 13 wines not long in cask	15·37	33·59
,, strongest	16·17	35·12
,, mean of 9 wines long in cask in E. Indies	14·72	32·30
,, Madre da Xeres	16·90	37·06
Madeira, long in cask in the East Indies	14·09	30·80
,, strongest	16·90	37·00
Teneriffe, long in cask at Calcutta	13·84	30·21

	Alc. by weight in 100 parts.	Proof-sp. by vol. in 100 parts.
Sercial	15·45	33·65
Dry Lisbon	16·14	34·71
Shiraz	12·95	28·30
Amontillado	12·63	27·60
Claret, 1st growth, 1811	7·72	16·95
Château-Latour, Do. 1825	7·78	17·06
Rausan, 2nd growth, 1825	7·61	16·74
Vin Ordinaire, Bordeaux	8·99	18·96
Rives Altes	9·31	22·35
Malmsey	12·86	28·37
Rudesheimer, first quality	8·40	18·44
,, inferior	6·90	15·19
Hambacher, 1st qual.	7·35	16·15
Edinb. ale, unbottled	5·70	12·60
,, 2 yrs. bot.	6·06	13·40
London porter, four months in bottle.	5·36	11·91

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* This strength is sometimes called "Trois-six" ($\frac{3}{6}$ths), because it requires $\frac{3}{6}$ths or half its volume of water to reduce it to Eau de Vie at 56° p. c. = Proof Spirit.

The alcohol of most true wines is derived solely from the fermentation of the sugar, or alteration of the acids contained in the grape-juice from which they are produced. In others the proportion is increased by adding starch-sugar before or during fermentation. In others, again, it is added directly in the form of brandy, partly to please the palate of consumers, partly because it is thought necessary to make the wine keep well. The strong wines commonly used in Britain, such as Port, Sherry, and the like, are almost all strengthened in this manner, and frequently also the inferior sorts of Bordeaux wine.

STAPHISAGRIÆ SEMINA.

STAVESACRE SEEDS.

[NEW.]

The dried ripe seeds of *Delphinium Staphisagria*.

Now included in B. P.; was a Not Official in Companion 1866.

(Belg. Semen Staphysagriæ; Fr. Staphysaigre; U.S. Staphisagriæ; not in Austr. Dan. Ger. or Russ.)

Medicinal Properties.

The seeds have been used in ointments for many years, but it has been discovered that the activity rests in an oil which they contain in rather large quantities. Mr. Balmanno Squire experimented with this Oil, and also with the seeds from which the Oil had been withdrawn by Ether, and found the latter inert; he gives the following for an Ointment which he has found very successful in treating Prurigo Senilis:—Oil of the Seeds, 1; Lard, 7; mix.

Preparation.

UNGUENTUM STAPHISAGRIÆ. [NEW.]

Stavesacre Seeds, 1; Benzoated Lard, 2: crush the seeds and macerate them in the Lard kept melted on a water bath for two hours. Strain through calico, and set aside to cool.

Contains 10 per cent. of the Oil of Stavesacre.

(Not in the other Pharmacopœias.)

STRAMONII SEMINA.

STRAMONIUM SEEDS.

The dried ripe seeds of *Datura Stramonium*, an annual cultivated in Britain.

Its properties are due to the active principle Daturine, which can be obtained from the whole plant, but chiefly from the ripe fruit: it occurs in white crystals, as does the Sulphate.

Medicinal Properties.

Influences especially the respiratory organs. The extract and the tincture are used in convulsive coughs as anti-spasmodics, and as anodynes in gastrodynia and other painful affections. The extract given with success for hay asthma. Like Belladonna, it causes dilatation of the pupil.

The Leaves, which are Not Official, are much used in asthma, chiefly by smoking in the shape of cigarettes.

An Ointment of the fresh leaves relieves painful Cancer

(Belg. Dan. Fr. Russ. and U.S. leaves and seeds; Austr. and Ger. seeds only.)

Preparations.

EXTRACTUM STRAMONII. Black.

Pack Stramonium Seeds, in No. 40 powder, in a percolator, and pass about their own weight of Washed Ether slowly through them, remove the Ether and set aside; now pour over them Proof Spirit until the seeds are exhausted. Distil off the spirit, and evaporate the residue by a water bath to a proper consistence for forming pills.

Dose.—$\frac{1}{4}$ gr., gradually increasing.

(Belg. from fresh leaves; Dan. and Russ. from dried leaves; Fr. from fresh leaves, also from seeds; U.S. from seeds, also fluid extract from seeds.)

TINCTURA STRAMONII. Light brown.

Stramonium Seeds, bruised, 1; Proof Spirit, 8: macerate forty-eight hours with 6 of the spirit, agitating occasionally; pack in a percolator, let it drain, and pour on the remaining spirit. When it ceases to drop, press, filter, and add proof spirit to make 8. =(1 in 8).

Dose.—10 to 30 minims.

(Belg. and Fr. from leaves 1 in 5, also Alcoolature with fresh leaves and Spirit equal parts; Dan. Russ. and U.S. from seeds 1 in 10; not in Austr. or Ger.; all by weight.)

INCOMPATIBLES.—The Mineral Acids, Caustic Alkalies, Metallic Salts.

ANTIDOTES.—Same as for poisoning with Belladonna, page 76; also Morphine subcutaneously and Chloroform Inhalation.

Not Official.

GUTTÆ DATURINÆ.—Sulphate of Daturine, 2 grs.; Water, 1 oz.—*London Ophthalmic* and *London Hospital.*

STRYCHNINA.

STRYCHNINE.

An Alkaloid $C_{21}H_{22}N_2O_2$, eq. 334; obtained from Nux Vomica.

Discovered by Pelletier and Caventou in 1818.

In right square octahedrons or prisms, colourless and inodorous.

Solubility: 1 in 5760 of Water; 1 in 140 of Rectified Spirit; about 1 in 400 of Proof Spirit; 1 in 6 of Chloroform; nearly insoluble in Ether and Absolute Alcohol.

Tests.—It is not coloured by Nitric or Sulphuric Acid—indicating absence of Brucia. Leaves no ash when burned with free access of air. Pure Sulphuric Acid forms with it a colourless solution, which on the addition of Bichromate of Potassium acquires an intensely violet hue, speedily passing through red to yellow.

Medicinal Properties.

Similar to those of Nux Vomica; its chief use, however, being in the treatment of paralysis, especially in cases of lead-poisoning. Small doses have been given with advantage in epilepsy, connected with the catamenial period. It is a very active poison.

B. P. Dose.—$\frac{1}{30}$ to $\frac{1}{12}$ of a grain.

Divide by trituration with Sugar of Milk before making into pills.

(In all the Pharmacopœias except Ger.; Austr. Dan. Ger. and Russ. have also the Nitrate; Belg. Fr. Russ. and U.S. have also the Sulphate.)

Preparation.

LIQUOR STRYCHNINÆ HYDROCHLORATIS. Colourless. [ALTERED.]

Strychnine, in crystals, 9 grs.; Diluted Hydrochloric Acid, 14 minims; Rectified Spirit, 4 fl. drms.; Distilled Water, 12 fl. drms.; mix the Hydrochloric Acid with 4 drachms of the water, and dissolve the Strychnine in it by means of heat; then add the spirit and the remainder of the water. =(1 in 100).

108 minims contain 1 grain of Strychnine.

The strength has been increased slightly to make 1 grain in 100 grain-measures.

Dose.—4 to 10 minims = $\frac{1}{30}$ or $\frac{1}{12}$ gr. Strychnine.

2 minims subcutaneously injected for paralysis.

(Belg. *Tinctura* Strychninæ 1 in 200; not in the others.)

Antidotes.—Chloroform, Belladonna, Tinct. Aconite, Morphine, Tobacco, Hydrate of Chloral in 1 drachm doses.

A case of recovery after taking 3 grs. Strychnine. *Vide Lancet*, July 13, 1867.

8 grains of Morphine said to be an antidote for 1 gr. of Strychnine.

Animal Charcoal or Tannic Acid, followed by an emetic, or the stomach-pump. Bromide of Potassium, in $\frac{1}{2}$ oz. dose in water, with 30 grs. of Chloral. 2 drms. of the Bromide, with or without 10 grs. of Chloral, may be given every 15 or 20 minutes if necessary. Nitrite of Amyl inhalations, the Amyl being poured freely on a handkerchief and held close to the nose. The patient may be kept fully under Chloroform or Ether. *Extract from "What to Do in Cases of Poisoning"* (*Murrell*).

STYRAX PRÆPARATUS.

PREPARED STORAX.

A balsam prepared from the inner bark of *Liquidambar orientalis* in Asia Minor, purified by solution in Rectified Spirit, filtration, and evaporation.

Intense brown.

(Belg. Fr. Ger. and U.S.; not in Austr. Dan. or Russ.)

Medicinal Properties.

Stimulant and expectorant. Similar in action to the Balsams of Peru and Tolu. Recommended also in gonorrhœa and leucorrhœa said to be equal to Copaiba, and less disagreeable.

Dose.—10 to 20 grs. twice a day, gradually increasing.

Contained in Tinctura Benzoini Comp.

SUCCI.

JUICES.

Juices expressed from fresh medicinal plants, and preserved by the addition of Spirit, were introduced by the Author in 1835 (*Pharm. Journ.* vol. i.). By thus preserving the juice of the plant, its properties are not impaired by the action of air during the time necessary to dry the leaf for Tincture, nor by the action of both air and heat during the time necessary to evaporate the juice to the consistence of an Extract.

They were found in practice superior to the Tinctures, and have been since employed, especially by medical men in private practice, to the present time.

The following are the juices of the British Pharmacopœia, the formulas for which will be found under the names of the drugs from which they are prepared:—

SUCCUS BELLADONNÆ . . .	Dose, 5 to 15 mins.
SUCCUS CONII	„ ½ to 1 drm.
SUCCUS HYOSCYAMI	„ ½ to 1 drm.
SUCCUS SCOPARII	„ 1 to 2 drms.
SUCCUS TARAXACI	„ 2 to 4 drms.

These consist of 3 parts of Juice and 1 of Rectified Spirit.

Juices which are not official are enumerated in the Index.

The Alcoolatures of the Fr. are made by digesting equal weights of fresh plant and Rectified Spirit together for 10 days; press and filter. Aconite, Belladonna, Conium (Ciguë), Digitalis, Eucalyptus, Henbane (Jusquiame), Stramonium Leaves, Flowers of Colchicum, and Bulb of Colchicum, are so prepared.

Not Official.

SUCCINI OLEUM.

OIL OF AMBER.

Oil of Amber, 1; Spirit of Camphor, 1; Spirit of Hartshorn, 1: mix. A domestic embrocation for Hooping Cough: said to resemble Roach's.

Tinct. Succini.—Amber, in fine powder, 1; Rectified Spirit, 16. Digest 7 days. *Dose.*—25 minims in water for headache.

(Fr. Succin, 1; Alcohol (80°), 10.)

Not Official.

SULPHUR.

SULPHUR.

S, eq. 32.

Sulphur occurs native, and is found in masses or in the powdery form mixed with various impurities. It is abundant in volcanic countries, as in Sicily, Naples, and the Roman States. It exists largely in this country in combination with Iron and Lead. It readily sublimes, and when sublimed and washed is called washed or sublimed Sulphur.

SULPHUR PRÆCIPITATUM.

PRECIPITATED SULPHUR.

A greyish-yellow soft powder, free from grittiness, and with no smell of Sulphuretted Hydrogen. When heated in an open vessel, it burns with a blue flame and the evolution of Sulphurous Acid.

Test.—Entirely volatilized by heat: under the microscope it is seen to consist of opaque globules without any admixture of crystalline matter; otherwise corresponds with Sublimed Sulphur.

Medicinal Properties.

Similar to those of Sulphur Sublimatum, only more active. Mixed with Milk and rubbed till smooth, children take it readily.

Dose.—20 to 60 grs.

(In all the Pharmacopœias; Fr. Soufre Précipité.)

Precipitated Sulphur, 2; Carbonate of Potassium, 1; Lard, 8: mix.

Excellent for Scabies.

Lac Sulphuris of former Pharmacopœias contained a large amount of Sulphate of Lime.

SULPHUR SUBLIMATUM.

SUBLIMED SULPHUR.

A slightly gritty powder of a fine greenish-yellow colour; without taste and without odour until heated.

Tests.—Entirely volatilized by heat. It does not redden moistened litmus paper—indicating absence of Sulphurous and Sulphuric Acids. Solution of Ammonia, agitated with it and filtered, does not on evaporation leave any residue—indicating the absence of Sulphide of Arsenic.

Insoluble in water. Soluble in Oils and Turpentine with heat.

Medicinal Properties.

Laxative, diaphoretic, and resolvent; evidently passes off by the pores of the skin. It is chiefly employed in hemorrhoidal affections and chronic rheumatism; externally for skin diseases, especially scabies. Sometimes used as a dentifrice.

Dose.—As a stimulant, from 10 grs. upwards; as a laxative, in treacle or milk, 20 to 60 grs. or more.

(In all the Pharmacopœias; Fr. Soufre Sublimé Lavé.)

Preparations.

CONFECTIO SULPHURIS. Yellow. [MODIFIED.]

Sublimed Sulphur, 4 oz.; Acid Tartrate of Potassium, 1 oz.; Syrup of Orange Peel, 4 oz.; Tragacanth, in powder, 18 grs.: rub well together. =(1 in 2¼).

Tragacanth now added to give it a better consistence.

Dose.—60 to 120 grs.

(Not in the other Pharmacopœias.)

UNGUENTUM SULPHURIS. Yellow.

Sublimed Sulphur, 1; Benzoated Lard, 4: mix. =(1 in 5).

(Belg. 1 in 5; Fr. Pommade, 1 in 10; Russ. 1 in 3; U.S. 3 in 10.)

Precipitated Sulphur makes a more active Ointment, and Essence of Lemon covers the odour.

Not Official.

Chelsea Pensioner.—Sulphur, 6; Mustard, 6; Powdered Guaiacum, 3; Rhubarb, 1½; Nitre, 1½: mix. Honey or Treacle sufficient to make it into an Electuary.

Dose.—A teaspoonful every alternate evening for rheumatism; it is also taken in the morning as an aperient to regulate the bowels.

Trochisci Sulphuris Comp.—Each lozenge contains 5 grs. of Precipitated Sulphur, and 1 gr. of Cream of Tartar.

SULPHURIS IODIDUM.

IODIDE OF SULPHUR.

SI, eq. 159.

Iodine, 4; Sublimed Sulphur, 1: rub together in a glass or earthenware mortar until they are thoroughly mixed. Transfer to a flask, close the orifice loosely, and apply a heat gently so that the colour of the mass shall become gradually darkened. When the colour has become uniformly dark throughout increase the heat so as to produce liquefaction. Then incline the flask in different directions, in order to return into the liquid any portion of the Iodine which may have been condensed on the inner surface of the vessel. Lastly, withdraw the heat, and when the liquid has congealed, remove the mass by breaking the flask, reduce it to pieces, and keep these in a well-stoppered bottle.

A greyish-black solid, with a radiated crystalline appearance.

Solubility, 1 in 60 of Glycerine; 1 in 4 of Bisulphide of Carbon. Insoluble in Water.

Test.—If 100 grs. be thoroughly boiled with Water, the Iodine will pass off in vapour, and about 20 grs. of Sulphur will remain.

(Belg. Russ. and U.S.; not in Austr. Dan. Fr. or Ger.)

Preparation.

UNGUENTUM SULPHURIS IODIDI. Black. [ALTERED.]

Iodide of Sulphur, 30 grs.; Hard Paraffin ¼ oz.; Soft Paraffin ¾ oz.; triturate the Iodide of Sulphur in a glass or porcelain mortar, and gradually add the melted mixture of Hard and Soft Paraffin, rubbing them together until the ointment is perfectly cold and free from grittiness.

An excellent remedy for acne punctata and other eruptions of the skin. =(about 1 in 15½).

Now made with the Paraffins in place of Lard.

(Not in the other Pharmacopœias.)

SUMBUL RADIX.

SUMBUL ROOT.

The dried transverse sections of the root of *Ferula Sumbul.*

Imported from Russia and India.

In slices of two to four inches in diameter, possessing the odour of Musk, which it long retains.

(Russ; not in the other Pharmacopœias.)

Medicinal Properties.

A nervous stimulant in low typhoid fevers, and in asthenic cases of dysentery, diarrhœa, and malignant cholera. Valuable in delirium tremens.

Preparation.

TINCTURA SUMBUL. Reddish-brown. [ALTERED.]

Sumbul Root, in No. 40 powder, 1; Rectified Spirit, 8: macerate forty-eight hours with 6 of the spirit, agitating occasionally; pack in a percolator, let it drain, and pour on the remainder of the spirit, and when it ceases to drop, press, filter, and add Rectified Spirit to make 8. =(1 in 8).

Now made with Rectified in place of Proof Spirit.

Dose.—10 to 30 minims.

(Russ. 1 and 5, by weight; not in the others.)

SUPPOSITORIA.

Suppositories are for the most part prepared by the following general formula:—

Mix the Medicinal portion with a small quantity of the Oil of Theobroma, by rubbing them together, and add the mixture to the remainder of the Oil of Theobroma, previously melted at a low temperature. Then mix thoroughly without applying more heat, and immediately pour the mixture into suitable moulds. The moulds, previously made cold, must be kept so by immersion in iced water.

All difficulty in removing the suppositories from the moulds may be obviated by having the moulds previously wiped over with some oiled lint.

	Each contains
SUPPOSITORIA ACIDI CARBOLICI c. SAPONE.	1 gr.
SUPPOSITORIA ACIDI TANNICI.	3 grs.
SUPPOSITORIA ACIDI TANNICI c. SAPONE.	3 grs.
SUPPOSITORIA HYDRARGYRI.	5 grs. Mercurial Ointment.
SUPPOSITORIA IODOFORMI.	3 grs.
SUPPOSITORIA MORPHINÆ.	½ gr. Hydrochlorate of Morphine.
SUPPOSITORIA MORPHINÆ c. SAPONE.	½ gr. ditto.
SUPPOSITORIA PLUMBI COMPOSITUM.	3 grs. Acetate of Lead, 1 gr. Powdered Opium.

Suppositories, not official, are enumerated in the Index.

Not Official.

SYMPHYTI RADIX.

COMMON COMFREY ROOT.

The root is black without and white within. Flowers yellow, common in ditches near rivers.

(Belg. Radix Symphiti; Fr. Consoude; not in the others.)

Medicinal Properties.—Astringent, mucilaginous, glutinous; useful to form cases for injured limbs. The black rind is scraped off, and the mucilaginous root is then scraped carefully into a nice even pulp; this spread of the thickness of a crown-piece upon cambric or old muslin, is wrapped round the limb and bandaged over; it shortly stiffens, and forms a casing superior to starch, giving support and strength to the part. The Author knew a bone-setter who practised more than fifty years ago, and rendered himself famous for setting compound fractures with this root, which he kept secret, and he never removed the bandage after the first dressing, until the limb was well.

SYRUPI.

SYRUPS.

Syrups are apt to ferment or mould when made with too little sugar, and to crystallize when too concentrated; to avoid these inconveniences which have arisen from former instructions for the preparation of this class of medicines, the British Pharmacopœia directs that the product of each syrup shall be made up to one constant weight, thereby ensuring uniformity of consistence, which is perhaps as good a practical guide as taking the specific gravity, when cooled to 60° F. The Dublin Pharmacopœia directed that in the case of simple syrup the specific gravity should be given, namely, 1·330, and this gravity is a very proper one for ordinary temperatures, but it must be understood that if the syrup be exposed to a very low temperature, say 40° F., it may crystallize. It keeps perfectly well, however, at a range of temperature from 50° F. upwards. Of course the more refined the sugar, the cleaner and lighter in colour will be the syrup, but even with the best sugar a little scum will form on the surface, which must be removed; when straining is required, it must be done whilst the syrup is hot, and through flannel, returning the first runnings, if not quite bright, into the bag. Syrups keep best in full bottles; when a bottle has remained half empty a short time, although of the right density at first, it is very apt to crystallize; and when kept in large jars, say of from 8 to 10 gallons, with loose covers, the sides are generally studded with crystals, and the syrup is thus frequently rendered too weak to keep when sent out. To prevent fermentation, for instance, in the Syrup of Poppies, several additions have been proposed to be made, but they have not succeeded, because in our former processes for preparing the syrup, the matter which is the cause of the fermentation was not removed; Rectified Spirit is employed for that purpose, and the result is that Syrup of Poppies, which in the summer frequently fermented so much that it rushed out of the bottles, now remains unaltered. It is, however, necessary that no more spirit be added than is ordered, for a larger quantity is very apt to cause deposition of crystals.

In making simple syrup from any sugar requiring white of egg to render it perfectly bright, the egg should be beaten into a froth, and not added till the syrup has become hot enough to coagulate it; it should then be poured quickly in, and well stirred up with the syrup; the air enclosed in the froth causes the coagulated albumen to rise to the surface, so that it may be effectually removed by skimming, whereas, if it be mixed with the syrup before it is heated, the air escapes as it warms up, and a good part of the albumen does not rise; still, by straining the syrup it may be made bright.

Syrup of Lemon Juice, if kept long, deposits grape sugar, and should therefore be made in smaller quantity, and more frequently than the other syrups. The Syrups of Orange and Ginger are made from their Tinctures, which give just as good a flavour, and produce much brighter syrups, besides the advantage of avoiding the starch and other matters which were contained in the former syrups. The Syrup of Rose is made with the red roses. The Syrup of Senna, which was previously the exception of the syrups, being prepared with treacle, is made with refined sugar like the rest, and being treated like the Poppies, no longer ferments; it is very palatable and sufficiently active. The Syrup of Tolu is made by the London process. Syrup of Violets and others of little medicinal value have not been admitted into the British Pharmacopœia.

The following are the syrups of the British Pharmacopæia, the formulas for which will be found under the names of the drugs from which they are prepared:—

Dose.		
	SYRUPUS. *See* SACCHARUM	Sugar 1 in 1⅓.
1 drm. .	SYRUPUS AURANTII	Tinct. 1 in 8.
1 drm. .	SYRUPUS AURANTII FLORIS	1 in 6¾.
½ to 2 drs.	SYRUPUS CHLORAL	1 in 5½.
½ drm. .	SYRUPUS FERRI IODIDI, 4⅓ grs. in each drachm .	1 in 14
1 drm. .	SYRUPUS FERRI PHOSPHATIS, 1 gr. in each drachm.	
1 drm. .	SYRUPUS HEMIDESMI	. 1 in 8.

Dose.		
1 drm.	SYRUPUS LIMONIS	Juice 1 in 2.
1 drm.	SYRUPUS MORI	Juice 1 in 2.
1 drm.	SYRUPUS PAPAVERIS	Capsules 1 in 2¼.
1 drm.	SYRUPUS RHEI	Root 1 in 14.
1 drm.	SYRUPUS RHŒADOS	Petals 1 in 3½.
1 drm.	SYRUPUS ROSÆ GALLICÆ	Petals 1 in 17¼.
½ drm.	SYRUPUS SCILLÆ	1 in 17.
1 drm.	SYRUPUS SENNÆ	1 in 2.
1 drm.	SYRUPUS TOLUTANUS. *See* Bals. Tolu.	
1 drm.	SYRUPUS ZINGIBERIS	Strong Tinct. 1 in 26.

Syrups that are not official are enumerated in the Index.

TABACI FOLIA.

LEAF TOBACCO.

The dried leaves of the Virginian Tobacco, *Nicotiana Tabacum*.

Test.—It yields, when distilled with Solution of Potash, an alkaline fluid which has the peculiar odour of Nicotina, and precipitates with Perchloride of Platinum and Tincture of Galls.

(Belg. Dan. Ger. and Russ. Folia Nicotiana; Fr. Nicotiane ou Tabac; U.S. Tabacum; not in Austr.)

Medicinal Properties.

A powerful sedative, especially affecting the heart, frequently causing great depression. Narcotic and emetic. Smoked, it is sedative and expectorant in various cases of asthma. Occasionally used as snuff for affections of the head. It is dangerous on account of its poisonous properties, but useful as an antidote to the poison of Strychnine.

Antidotes.—In case Tobacco has been swallowed, an emetic; in any case stimulants internal and external. Professor Haughton, of Dublin, relies on Strychnine as an antidote for Tobacco, and on Tobacco for Strychnine.

From the leaf of the plant is obtained—

Nicotin, a nearly colourless volatile liquid alkaloid, sp. g. 1·048, of an acrid burning taste, inflammable, miscible with water, ether, alcohol, and the fixed oils; capable of being formed into crystalline salts; its formula is $\mathbf{C}_{10}\mathbf{H}_{14}\mathbf{N}_2$, eq. 162. To this alkaloid Tobacco owes its activity. Nicotin is a powerful poison.

(Russ; not in the other Pharmacopœias.)

TAMARINDUS.

TAMARIND.

The preserved pulp of the fruit of *Tamarindus Indica*, imported from the West Indies.

Test.—A piece of bright iron left in contact with the pulp for an hour does not exhibit any deposit of copper—the Tamarind acid would take up Copper if such vessels were used.

(In all the Pharmacopœias.)

Medicinal Properties.

Refrigerant and slightly laxative. Infused with water, forms a cooling drink in febrile affections.

Dose.—¼ oz. and upwards.
Contained in Confectio Sennæ.

TARAXACI RADIX.

DANDELION ROOT.

The fresh and dried roots of *Taraxacum officinale*, collected in the autumn from indigenous plants.

Much difference of opinion exists as to the proper time of taking up the root. Some think that the winter, when it yields the thick albuminous juice, is the best; others prefer the thin and bitter juice yielded by the root in the early summer. The Author inclines to the former opinion, and has so expressed himself in an article furnished to Mr. Brande,* and inserted by him in his "Materia Medica," published in 1839. Observations made throughout the year are there given. Juice taken from roots dug up in November, before any frost appeared, had a specific gravity of 1·080; 28 pounds of root yielded 7 pounds of Juice, from which, when heated to 212° F., besides 4 ounces of insoluble matter, it left on evaporation 28 ounces of Extract. This is not a correct average, for when in the highest perfection—

100 of fresh root yield 30 of juice=8 of extract. 100 of root, when dried, weigh 25.

Medicinal Properties.

A mild laxative, acting specially on the liver. In dropsy, arising from obstruction of the liver, it is given in combination with purgatives.

A very feeble stimulant of the liver.—Dr. Rutherford.

(In all the Pharmacopœias; Fr. Pissenlit.)

Preparations.

DECOCTUM TARAXACI.

Dried Dandelion Root, sliced and bruised, 1; Distilled Water, 20: boil ten minutes and strain. The product should be made up to 20. =(1 in 20).

Dose.—2 to 4 oz.

(Not in the other Pharmacopœias.)

EXTRACTUM TARAXACI. Light brown; deepens with age.

Crush fresh Dandelion Root, press out the juice, and allow it to deposit; heat the clear liquor to 212° F. (100° C.), and maintain the temperature for ten minutes; then strain and evaporate by a water bath at a temperature not exceeding 160° F. (71·1° C.) to a proper consistence for forming pills.

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* Brande's "Materia Medica," published in 1839, is now very scarce; the following interesting facts have been copied from it to show the quantity of juice required to produce 1 lb. of extract in the different months.

"In January and February, 4 to 5 lbs.; in March, 6 or 7 lbs.; in April and May, 8 to 9 lbs.; June, July, and August, 6 to 7 lbs.; in September and October, 4 to 5 lbs.; in November and December, 4 lbs. During November and December the root is in the most vigorous condition, and most abundant in those ingredients upon which its medicinal powers depend. Frost has a singular effect upon the growing roots, causing the bitterness to decrease, and sweetness to take its place; it is also observable, on the disappearance of the frost, the sweetness disappears and the bitter returns in a stronger degree. From Mr. Squire's analysis, Taraxacum juice contains gum, albumen, gluten, an odorous principle, and a crystallizable bitter principle, soluble in alcohol and water."

100 pounds of fresh root yield 30 pounds of juice=8 pounds of extract.

Dose.—5 to 15 grs.

(U.S. from fresh root; Fr. from dried Leaves; Austr. Belg. Dan. Ger. and Russ. from whole plant.)

EXTRACTUM TARAXACI LIQUIDUM. [NEW.]

Dry Dandelion Root, in No. 20 powder, 40; Proof Spirit, 80; Distilled Water, a sufficiency. Macerate the Dandelion in the Spirit forty-eight hours; then press out 20 of liquid and set this aside. Macerate the marc with Water forty-eight hours; press out and strain the liquid, and evaporate on a water bath to about 18. Mix the spirituous and aqueous extractions together and make up with Distilled Water to 40.

Dose.—¼ to 2 drms.

(U.S.; not in the other Pharmacopœias.)

SUCCUS TARAXACI. Deep brown.

Bruise Dandelion Root in a stone mortar, press out the Juice, and to every 3 measures of Juice add 1 of Rectified Spirit: set aside seven days and filter. Keep it in a cool place.

Dose.—1 to 2 drms.

(Not in the other Pharmacopœias.)

Not Official.

TEREBENE.

An oily liquid having the odour of Thyme Oil.

Sp. g. ·864. Boiling point 156° C. (312·8° F.)

Soluble 1 in 7¼ of Rectified Spirit; in all proportions of Absolute Alcohol or Chloroform; 1 in 3¾ of Ether; 5 in 8 of Glacial Acetic Acid; very sparingly in Water.

Test.—It is optically inactive on polarized light.

Medicinal Properties.

Used for the relief of winter cough (chronic bronchitis.) Five or six drops given on Sugar every four hours, or used as a spray or as an antiseptic inhalation from a respirator.

Flexible capsules are made containing 5 and 10 minims each.

TEREBINTHINA CANADENSIS.

CANADA BALSAM.

The Turpentine obtained by puncturing or incising the bark of the trunk and branches of *Pinus balsamea*. Pale straw.

Soluble in all proportions of Benzol, Chloroform, and Ether; 1 in 3 (*or less*) of Absolute Alcohol; 1 in 1 (*or less*) of Rectified Spirit.

Dose.—5 grains in a pill with half its weight of calcined Magnesia.

(U.S.; not in the others.)

Contained in Charta Epispastica, Collodion Flexile.

TEREBINTHINÆ OLEUM.

OIL OF TURPENTINE.

The oil distilled by aid of steam from the oleo-resin (Turpentine) obtained from *Pinus Australis*, *Pinus Tæda*, sometimes from *Pinus Pinaster* and *Pinus Sylvestris*; rectified if necessary. Colourless.

Oil of Turpentine dissolves Wax, Iodine, Sulphur, Phosphorus, fixed oils, and resins forming varnish.

Solubility: 1 in 6½ of Rectified Spirit; in all proportions of Absolute Alcohol and Chloroform; 3 in 10 of Ether; 1 in 3 of Glacial Acetic Acid.

Medicinal Properties.

Stimulant, diuretic, occasionally diaphoretic, anthelmintic; 5 mins. three times a day for hemorrhage from the lungs; in large doses purgative, sometimes causing nausea, vomiting, and intoxication. It especially affects the kidneys, and the mucous membrane of the genito-urinary organs. Is given in doses of 2 to 4 drms. in puerperal fever. Antispasmodic in hysterical affections. Externally rubefacient; employed as a liniment in chronic inflammation. A good liniment for rheumatism is made thus: Turpentine, 1; Chloroform of Belladonna, ½; Soap Liniment, 2½: mix.

Flies and gnats are kept away by the odour of Turpentine.

Dose.—10 to 30 minims; as an anthelmintic, 2 to 4 drms. May be given in Mistura Amygdalæ.

(Belg. Essentia Terebinthinæ; Dan. Ætheroleum Terebinthinæ; Fr. Essence de Térébenthine; Ger. Terebinthina; Austr. Russ. and U.S. Oleum Terebinthinæ.)

1 drm. of Mucilage, with diligent trituration, renders ½ drm. of Oil of Turpentine emulsive, with 1 oz. of Distilled Water.

30 grs. Powder of Acacia rubbed first with 1 drm. of Oil of Turpentine, then with 1 drm. of Water, and lastly triturating whilst adding gradually 1 oz. Distilled Water, makes a good emulsion.

Preparations.

CONFECTIO TEREBINTHINÆ. Light olive-brown.

Oil of Turpentine, 1; Liquorice Powder, 1; Clarified Honey, 2: mix. =(1 in 4).

Rub the first two together, and add the Honey; but if the Turpentine separates pour it off, and re-add it gradually with constant trituration, and it will unite.

Dose.—60 to 240 grs. daily; for Tænia, 2 to 4 oz.

(Not in the other Pharmacopœias.)

It is much used in Dublin as a diffusible stimulant in chronic bronchitis, and is very palatable if rubbed up with Peppermint Water.

ENEMA TEREBINTHINÆ.

Oil of Turpentine, 1 oz.; Mucilage of Starch, 15 oz.: mix for 1 enema.

(Not in the other Pharmacopœias.)

LINIMENTUM TEREBINTHINÆ. Fawn-coloured emulsion. [ALTERED.]

Oil of Turpentine, 16; Camphor, 1; Soft Soap, 2; Distilled Water, 2: mix the Soap with the Water; dissolve the Camphor in the Turpentine; rub these fluids together till thoroughly mixed. =(1 in 1¼).

Distilled Water is now added.

(U.S. Resin Cerate 65, Ol. Turpentine 35; Ger. Ol. Turpentine 20, Soft Soap 27, Carbonate of Potassium 3; not in the others.)

LINIMENTUM TEREBINTHINÆ ACETICUM. Separates as soon as shaking has ceased.

Oil of Turpentine, 4; Glacial Acetic Acid, 1; Liniment of Camphor, 4: mix. =(1 in 3).

An imitation of St. John Long's celebrated Liniment.

UNGUENTUM TEREBINTHINÆ. Yellowish brown.

Oil of Turpentine, 1 oz.; Resin, in powder, 54 grs.; Yellow Wax, ½ oz.; Prepared Lard, ½ oz.: melt the ingredients together over a water bath, remove the vessel and stir till cold. =(1 in 2¼).

(Dan. and Ger. also Russ. (Ung. Basilicum) differ from this in composition; not in the others.)

THEOBROMATIS OLEUM.

OIL OF THEOBROMA.

Syn. Cacao Butter.

A concrete oil, obtained by expression and heat from the ground seeds of *Theobroma Cacao.*

(Austr. Belg. Dan. Ger. and Russ. Oleum Cacao; Fr. Beurre de Cacao; U.S. Oleum Theobromæ.)

Occurs in cakes of a yellowish colour and of a pleasant odour resembling chocolate. Does not become rancid from exposure to air. Melts between 86° and 95° F. (30° and 35° C.). *Brit. Ph.*

Contained in several of the suppositories.

Not Official.

The following form good bases for suppositories:—

Theobroma Oil, when melted, begins to solidify at . .	72° F.
Stearine of Cocoa-nut Oil ,, ,, ,, ,, . .	75° F.
4 of Stearine and 2 Mutton Fat ,, ,, ,, . .	77° F.
4 of Stearine and 1 Spermaceti ,, ,, ,, . .	80° F.

Stearine alone is perhaps a better substance than Cacao Butter for making suppositories. It begins to solidify at 78° F., but there is Stearine that solidifies at 120° F.; this will not answer for suppositories.

THERIACA.

TREACLE.

Syn. Sacchari Fæx, *Lond.*

The uncrystallized residue of the refining of Sugar. Golden Syrup of Commerce. Intense brown.

Sp. about g. 1·40.

Test.—Free from empyreumatic odour or flavour.

Medicinal Properties.

Demulcent, nutrient, and slightly laxative. A favourite condiment in pharmacy, chiefly employed to make pills, for which, on account of its retentiveness of moisture, it is well adapted.

(Not in the other Pharmacopœias.)

Contained in Pil. Asafœt. Comp., Pil. Rhei Comp., Pil. Scillæ Comp.

THUS AMERICANUM.

COMMON FRANKINCENSE.

The concrete Turpentine which is scraped off the trunks of the Swamp Pine, *P. palustris*, and the Frankincense Pine, *Pinus Tæda.* From the Southern States of North America.

When fresh, it is a softish bright yellow opaque solid, resinous but tough, having the odour of American turpentine, but by keeping it becomes dry and brittle, darker in colour and of a milder odour.

Almost wholly soluble 1 in 1 of Rectified Spirit; entirely 4 in 3 of Ether.

The true Thus is *Pix Burgundica*, from the Spruce Fir, *Abies excelsa*. *See* PIX BURGUNDICA, page 265.

Medicinal Properties.

Used externally as a stimulant.

Contained in Emplastrum Picis.

THYMOL.

THYMOL.

$C_{10}H_{13}HO$.

[NEW.]

A stearoptene obtained from the volatile oils of *Thymus Vulgaris*, *Monarda punctata*, and *Carum Ajowan*, by saponifying with Caustic Soda and treating the separated Soap with Hydrochloric Acid, and from a distilled fraction of the oil by exposure at a low temperature. It may be purified by recrystallization from Alcohol.

Now included in B.P.; was a Not Official in Companion, 1877.

Colourless, transparent crystals, with an aromatic odour.

Solubility: nearly 1 in 1000 of Water; 1 in 190 of Glycerine; 8 in 3 of Rectified Spirit or Ether; 8 in 5 of Chloroform; 1 in 6 of Benzin; 1 in 3 of Oil of Turpentine; 1 in 2 of Olive Oil; 4 in 3 of Glacial Acetic Acid; 1 in 6 of Solution of Potash.

(Fr. and U.S. Thymol; Ger. Thymolum; Russ. Acid Thymicum; not in Austr. Belg. or Dan.)

Medicinal Properties.

A solution of 1 part in 1000 of Water is a very powerful antiseptic; it arrests fermentation in a solution of Sugar and Yeast better than either Carbolic Acid or Salicylic Acid, and it also arrests putrefaction of animal matters. *B. M. Journal*, May 22nd, 1875.

It certainly is very useful in lying-in hospitals, doing away with the unpleasant odour of decomposing animal matters.

TINCTURÆ.

TINCTURES.

Many of these have been directed by the British Pharmacopœia to be made by percolation, and as this operation imposes several conditions to be complied with in order that it may be efficiently performed, directions on the subject will be found immediately after the group of Tinctures.

The following are the Tinctures of the British Pharmacopœia, the formulas for which will be found under the names of the drugs from which they are prepared; all are made with Proof Spirit unless otherwise stated.

Dose.		Proportion of active ingredients in the mass.	
5 to 15 min.	TINCTURA ACONITI	1 in 8	Rect. Sp.
1 to 2 drm.	TINCTURA ALOES	1 in 40.	
½ to 1 drm.	TINCTURA ARNICÆ	1 in 20	Rect. Sp.
½ to 1 drm.	TINCTURA ASAFŒTIDÆ	1 in 8	Rect. Sp.
1 to 2 drm.	TINCTURA AURANTII	1 in 10.	
1 to 2 drm.	TINCTURA AURANTII RECENTIS		Rect. Sp.
5 to 20 min.	TINCTURA BELLADONNÆ	1 in 20.	
½ to 1 drm.	TINCTURA BENZOINI COMP.	1 in 10	Rect. Sp.
1 to 2 drm.	TINCTURA BUCHU	1 in 8.	
½ to 2 drm.	TINCTURA CALUMBÆ	1 in 8.	
15 to 60 min.	TINCTURA CAMPHORÆ COMPOSITA.		
	Opium 1, Benzoic Acid 1, Camphor ¾, in 240.		
5 to 20 min.	TINCTURA CANNABIS INDICÆ (Extract)	1 in 20	Rect. Sp.
5 to 20 min.	TINCTURA CANTHARIDIS	1 in 80.	
10 to 20 min.	TINCTURA CAPSICI	1 in 27	Rect. Sp.
½ to 2 drm.	TINCTURA CARDAMOMI COMP.	1 in 80.	
½ to 2 drm.	TINCTURA CASCARILLÆ	1 in 8.	
½ to 2 drm.	TINCTURA CATECHU	1 in 8.	
½ to 2 drm.	TINCTURA CHIRATÆ	1 in 8.	
20 to 60 min.	TINCTURA CHLOROFORMI COMP.	1 in 10	Rect. Sp.
5 to 10 min.	TINCTURA CHLOROFORMI ET MORPHINÆ.		
15 to 60 min.	TINCTURA CIMICIFUGÆ	1 in 8	
½ to 2 drm	TINCTURA CINCHONÆ	1 in 5.	
½ to 2 drm.	TINCTURA CINCHONÆ COMP.	1 in 10.	
½ to 2 drm.	TINCTURA CINNAMOMI	1 in 8.	Rect. Sp.
30 min.	TINCTURA COCCI	1 in 8.	
10 to 30 min.	TINCTURA COLCHICI SEMINUM	1 in 8.	
20 to 60 min.	TINCTURA CONII (Fruit)	1 in 8.	
½ drm.	TINCTURA CROCI	1 in 20.	
½ to 2 drm.	TINCTURA CUBEBÆ	1 in 8	Rect. Sp.
10 to 30 min.	TINCTURA DIGITALIS	1 in 8.	
5 to 30 min.	TINCTURA ERGOTÆ	1 in 4	
5 to 30 min.	TINCTURA FERRI ACETATIS		Rect. Sp. and Water.
10 to 30 min.	TINCT. FERRI PERCHLORIDI (Liquor)	1 in 4.	
½ to 2 drm.	TINCTURA GALLÆ	1 in 8.	
5 to 20 min.	TINCTURA GELSEMII	1 in 8.	
½ to 2 drm.	TINCTURA GENTIANÆ COMP	1 in 13⅓.	
½ to 1 drm.	TINCTURA GUAIACI AMMONIATA	1 in 5.	Arom. Sp. Ammon.
½ to 1 drm.	TINCTURA HYOSCYAMI	1 in 8.	
5 to 20 min.	TINCTURA IODI . Iodine 1, Iodide Potass.	1 in 40	Rect. Sp.
½ to 1 drm.	TINCTURA JABORANDI.		
½ to 2 drm.	TINCTURA JALAPÆ	1 in 8.	
½ to 2 drm.	TINCTURA KINO	1 in 10.	Rect. Sp. and Water.
½ to 2 drm.	TINCTURA KRAMERIÆ	1 in 8.	
20 to 30 min.	TINCTURA LARICIS	1 in 8	Rect. Sp.
½ to 2 drm.	TINCTURA LAVANDULÆ COMP. (Oil).	1 in 213	Rect. Sp.
½ to 2 drm.	TINCTURA LIMONIS	1 in 8.	
10 to 30 min.	TINCTURA LOBELIÆ	1 in 8.	
10 to 30 min.	TINCTURA LOBELIÆ ÆTHEREA	1 in 8	Sp. Ether.

Dose.		Proportion of active ingredients in the mass.	
½ to 2 drm.	TINCTURA LUPULI	1 in 8.	
½ to 1 drm.	TINCTURA MYRRHÆ	1 in 8	. Rect. Sp.
10 to 20 min.	TINCTURA NUCIS VOMICÆ	1 gr. of Alkaloids in 1 oz.	Rect. Sp. & Water.
5 to 40 min.	TINCTURA OPII	1 in 13½.	
½ to 1 drm.	TINCTURA OPII AMMONIATA	1 gr. in 96 mins. .	Rect. Sp.
15 to 60 min.	TINCTURA PODOPHYLLI		Rect. Sp.
	TINCTURA PYRETHRI	1 in 5	. Rect. Sp.
½ to 2 drm.	TINCTURA QUASSIÆ	1 in 27.	
½ to 2 drm.	TINCTURA QUININÆ	1 gr. in 60 min.	Tr. Orange.
½ to 2 drm.	TINCTURA QUININÆ AMMONIATA .	1 gr. in 60 mins.	
	TINCTURA RHEI	1 in 10.	
20 to 60 min.	TINCTURA SABINÆ	1 in 8.	
10 to 30 min.	TINCTURA SCILLÆ	1 in 8.	
½ to 2 drm.	TINCTURA SENEGÆ	1 in 8.	
1 to 4 drm.	TINCTURA SENNÆ	1 in 8.	
½ to 2 drm.	TINCTURA SERPENTARIÆ	1 in 8.	
10 to 30 min.	TINCTURA STRAMONII	1 in 8.	
10 to 30 min.	TINCTURA SUMBUL	1 in 8.	. Rect. Sp.
20 to 40 min.	TINCTURA TOLUTANA—*See* BALSAM .	1 in 8.	. Rect. Sp.
1 to 2 drm.	TINCTURA VALERIANÆ	1 in 8.	
½ to 1 drm.	TINCTURA VALERIANÆ AMMONIATA	1 in 8	Arom. Sp. Ammon.
5 to 20 min.	TINCTURA VERATRI VIRIDIS . . .	1 in 5	. Rect. Sp.
15 to 60 min.	TINCTURA ZINGIBERIS	1 in 8	. Rect. Sp.
5 to 20 min.	TINCTURA ZINGIBERIS FORTIOR . .	1 in 2	. Rect. Sp.

Tinctures that are not official are enumerated in the Index.

DIRECTIONS FOR PERCOLATING TINCTURES.

After the materials have been macerated for forty-eight hours in three-fourths of the menstruum ordered, percolation will be most efficiently performed by decanting the liquid, pressing the ingredients in the hand, and carefully packing them, in small portions at a time, in a conical percolator, so that the mass shall be uniformly tight throughout. The decanted liquid may then be poured upon the ingredients and allowed to percolate; the remainder of the menstruum being afterwards poured upon them in order to chase the strong tincture out. As soon as the liquid ceases to drop, the ingredients are to be removed and pressed. Any deficiency in the product may be made up by adding more of the menstruum and repeating the pressure.

TRAGACANTHA.

TRAGACANTH.

A gummy exudation obtained from incisions made in the stem of *Astragalus gummifer*, and some other spices of Astragalus.

Collected in Asia Minor. Nearly white.

Sparingly soluble in cold water.

Tests.—After maceration in cold water, the fluid portion is not precipitated by the addition of Rectified Spirit—indicating absence of

Acacia Gum; and the gelatinous mass, when boiled and cooled, is not turned blue by Tincture of Iodine—indicating absence of Starch.

Medicinal Properties.

Demulcent. Used for the suspension of heavy insoluble powders in liquids; the compound powder equal to the weight of the powder itself may be used.

Dose.—Of the powder, 20 grs. upwards.

(Belg. Dan. Fr. Ger. Russ. and U.S.; not in Austr.)

Preparations.

GLYCERINUM TRAGACANTHÆ. [NEW.]

Tragacanth, in powder, 110 grs.; Glycerine, 1 oz.; Distilled Water, 74 fl. grs: mix the Tragacanth and Glycerine, add the Water, and rub until a translucent homogeneous jelly is formed.

This is an attempt at making the proportions, Tragacanth 3, Glycerine 12, Distilled Water 2, but with indifferent success; fluid grains are not in the "Weights and Measures" of the *Brit. Pharm.*, but they are the same as grain-measures used in volumetric testing.

(Not in the other Pharmacopœias.)

MUCILAGO TRAGACANTHÆ. Should be made as required. [ALTERED.]

Tragacanth, in powder, 60 grs.; Distilled Water, 10 oz.; Rectified Spirit, 2 fl. drs.: mix the Tragacanth with the spirit, then pour in the Water with constant agitation. =(1 in 70).

Now contains Rectified Spirit.

Dose.—1 oz. upwards.

(Belg. 1 in 83; Fr. Mucilage de Gomme Adragante 1 in 10; Russ. Tragacanth 4, Acacia 1, Water 480; U.S. 1 in 16⅔ with Glycerine; not in the others.)

One part of Tragacanth gives more viscosity to water than 25 parts of Gum Arabic.

A good excipient for pills is, Tragacanth in powder, 1; Glycerine, 4; rubbed together and kept for use.

PULVIS TRAGACANTHÆ COMPOSITUS. White.

Tragacanth in powder, 1; Gum Acacia in powder, 1; Starch in powder, 1; Refined Sugar in powder, 3: rub well together. =(1 in 6).

Dose.—10 to 60 grs.

(Not in the other Pharmacopœias.)

Not Official.

TRIFOLIUM.

CLOVER.

Syrupus.—A teaspoonful 3 or 4 times a day for Hooping Cough.

Not Official.

TRITICUM REPENS.

CREEPING COUCH GRASS.

(Belg. Ger. and Russ. Rhizoma Graminis; Fr. Chien-dent; U.S. Triticum.)

DECOCTUM TRITICI.

Root, 1 oz.; Water, 20 oz.: boil ten minutes, and strain when cold.

Dose.—4 to 8 oz. three times a day for mucous discharge from the bladder.

(Fr. Tisane 1 in 50.)

TROCHISCI.

LOZENGES.

The following are the Lozenges of the British Pharmacopœia:—

		Quantity of the active ingredient contained in each lozenge.
TROCHISCI ACIDI BENZOICI		½ grain.
TROCHISCI ACIDI TANNICI		½ grain.
TROCHISCI BISMUTHI	(Subnitrate)	2 grains.
TROCHISCI CATECHU		1 grain.
TROCHISCI FERRI REDACTI		1 grain.
TROCHISCI IPECACUANHÆ		¼ grain.
TROCHISCI MORPHINÆ.	(Hydrochlorate)	$\frac{1}{36}$ grain.
TROCHISCI MORPHINÆ ET IPECAC.	,,	$\frac{1}{36}$ and $\frac{1}{12}$ gr. Ipecac.
TROCHISCI OPII	(Extract)	$\frac{1}{10}$ grain.
TROCHISCI POTASSII CHLORATIS		5 grains.
TROCHISCI SANTONINI		1 grain.
TROCHISCI SODII BICARBONATIS		5 grains.

Lozenges that are not official are enumerated in the Index.

Black currant paste is a most convenient substance for making Lozenges of any special drug.

UNGUENTA.

OINTMENTS.

The following are the Ointments of the British Pharmacopœia, the formulas for which will be found under the names of the drugs from which they are prepared:—

		Proportion of active ingredients in the mass
UNGUENTUM ACIDI BORICI		1 in 7.
UNGUENTUM ACIDI CARBOLICI		1 in 19.
UNGUENTUM ACIDI SALICYLICI		1 in 28.
UNGUENTUM ACONITINÆ		1 in 60.
UNGUENTUM ANTIMONII TARTARATI		1 in 5.
UNGUENTUM ATROPINÆ		1 in 60.
UNGUENTUM BELLADONNÆ	(Extract)	1 in 10.
UNGUENTUM CALAMINÆ		1 in 6.
UNGUENTUM CANTHARIDIS	about	1 in 7.
UNGUENTUM CETACEI		1 in 5½.
UNGUENTUM CHRYSAROBINI		1 in 25.
UNGUENTUM CREASOTI		1 in 9.
UNGUENTUM ELEMI		1 in 5.
UNGUENTUM EUCALYPTI		1 in 5.
UNGUENTUM GALLÆ		1 in 6½.
UNGUENTUM GALLÆ CUM OPIO	(Opium)	1 in 14½.
UNGUENTUM GLYCERINI PLUMBI SUBACETATIS		1 in 6½.
UNGUENTUM HYDRARGYRI	(Mercury)	1 in 2.
UNGUENTUM HYDRARGYRI AMMONIATI		1 in 10.
UNGUENTUM HYDRARGYRI COMPOSITUM		1 Mercury in 4½.
UNGUENTUM HYDRARGYRI IODIDI RUBRI		1 in 28.
UNGUENTUM HYDRARGYRI NITRATIS	(Mercury)	1 in 15½.
UNGUENTUM HYDRARGYRI NITRATIS DILUTUM		1 in 3.

		Proportion of active ingredients in the mass.
UNGUENTUM HYDRARGYRI OXIDI RUBRI		1 in 8.
UNGUENTUM HYDRARGYRI SUBCHLORIDI		1 in 6½.
UNGUENTUM IODI	(Iodine)	1 in 31.
UNGUENTUM IODOFORMI		1 in 10.
UNGUENTUM PICIS LIQUIDÆ		5 in 7.
UNGUENTUM PLUMBI ACETATIS		1 in 37½.
UNGUENTUM PLUMBI CARBONATIS		1 in 8.
UNGUENTUM PLUMBI IODIDI		1 in 8.
UNGUENTUM POTASSÆ SULPHURATÆ		1 in 15½.
UNGUENTUM POTASSII IODIDI	about	1 in 8¾.
UNGUENTUM RESINÆ		1 in 3¾.
UNGUENTUM SABINÆ	nearly	1 in 2½.
UNGUENTUM SIMPLEX.		
UNGUENTUM STAPHISAGRIÆ.	about	1 in 2¼.
UNGUENTUM SULPHURIS		1 in 5.
UNGUENTUM SULPHURIS IODIDI		1 in 15½.
UNGUENTUM TEREBINTHINÆ	(Oil)	1 in 2⅕.
UNGUENTUM VERATRINÆ.		1 in 63.
UNGUENTUM ZINCI		1 in 6½.
UNGUENTUM ZINCI OLEATI		1 in 2.

Ointments which are not official are enumerated in the Index.

Not Official.

URETHANE.

$C_3H_7NO_2$.

The Ethylic Ether of Carbaminic Acid.
In white crystals, free from odour.
Soluble 1 in 2 of Water; 1 in 1 of Rectified Spirit; 2 in 3 of Ether.

Medicinal Properties.

Hypnotic and sedative.

Dose.—15 grs., or 8 grs. repeated after two or three hours.—*Brit. Med. Jl.*, ii., 1885, p. 611, and i., 1886, pp. 343, 354.

UVÆ.

RAISINS.

The ripe fruit of the Grape Vine, *Vitis vinifera*, dried in the sun or with artificial heat. Imported from Spain.

(Fr. Raisin; not in the other Pharmacopœias.)

Medicinal Properties.

Nutritious and demulcent. Principally used as a flavouring agent.

Contained in Tinct. Cardam. Comp., Tinct. Sennæ.

UVÆ URSI FOLIA.

BEARBERRY LEAVES.

The dried leaves of *Arctostaphylos Uva ursi*, from indigenous plants.

(Austr.; Belg.; Fr. Busserole; Dan.; Ger.; Russ.; and U.S.)

Medicinal Properties.

Astringent and tonic, with a direct influence on the kidneys and urinary organs. Used in menorrhagia and diabetes, also in chronic dysentery.

Dose.—Of the powdered leaf, 10 to 30 grs.

Preparation.

INFUSUM UVÆ URSI.

Bearberry Leaves, bruised, 1; boiling Distilled Water, 20: infuse one hour, and strain. =(1 in 20).

Dose.—1 to 2 oz.

In the 1864 Pharmacopœia the leaves were not ordered to be bruised; *when bruised*, the infusion is stronger, but a large deposit forms from the strained fluid.

(Not in the other Pharmacopœias.)

INCOMPATIBLES.—Iron Salts, Lead Salts, Nitrate of Silver, Vegetable Alkaloids, Gelatine.

VALERIANÆ RHIZOMA.

VALERIAN RHIZOME.

The root of *Valeriana officinalis*, indigenous and cultivated in Britain, collected in autumn and dried; that from wild plants growing on dry soil preferred.

Medicinal Properties.

It is a nervous stimulant and antispasmodic. Useful in hysteria and nervous diseases; also in chorea and epilepsy; and as an adjunct to tonics.

Dose.—10 to 30 grs. of the powder.

(In all the Pharmacopœias.)

Preparations.

INFUSUM VALERIANÆ.

Valerian Rhizome, bruised, ¼ oz.; boiling Distilled Water, 10 oz.: infuse one hour, and strain. =(about 1 in 40).

Dose.—1 to 2 oz.

(Fr. Tisane, 1 in 100; not in the other Pharmacopœias.)

TINCTURA VALERIANÆ. Intense reddish-brown.

Valerian Rhizome, in No 40 powder, 1; Proof Spirit, 8: macerate the Valerian forty-eight hours with 6 of the spirit, agitating occasionally; pack in a percolator, let it drain, pour on the remainder of the spirit; when it ceases to drop, press and filter, and add proof spirit to make 8. =(1 in 8).

Dose.—1 to 2 drms.

(Austr. Belg. Dan. Fr. Ger. Russ. and U.S. 1 in 5; all by weight.)

TINCTURA VALERIANÆ AMMONIATA. Intense reddish-brown. [MODIFIED.]

Valerian Rhizome, in No. 40 powder, 1; Aromatic Spirit of Ammonia, 8: macerate the Valerian seven days, strain, press, filter, and add Aromatic Spirit of Ammonia to make 8. =(1 in 8).

The formula for Aromatic Spirit of Ammonia has been altered.

Dose.—½ to 1 drm.

(U.S. 1 in 5; not in the others.)

Not Official.

TINCTURA VALERIANÆ ÆTHEREA.

Belg. Dan. and Ger. Bruised Valerian 1, Spirit of Ether 5, by weight: macerate eight days.

Fr. Powdered Valerian 1, Ether (sp. g. ·758) 5, by percolation.

VAPORES.

INHALATIONS.

VAPOR ACIDI HYDROCYANICI, 10 to 15 minims, and 1 drm. cold Water.

VAPOR CHLORI, Chlorinated Lime, 2 oz.; cold Water, a sufficiency.

VAPOR CONINÆ, Juice of Hemlock, ½ oz.; Solution of Potash, 1 drm.; Water, 1 oz.: of this mixture use 20 minims and hot Water.

VAPOR CREASOTI, 12 minims, in 8 oz. boiling Water.

VAPOR IODI, Tincture of Iodine, 1 drm.; Water, 1 oz.: apply a gentle heat.

VAPOR PINI SYLVESTRIS, 5 minims; Light Carbonate of Magnesium, 2½ grs.; Water, 1 drm.

VERATRINA.

VERATRINE.

An alkaloid, or mixture of alkaloids, obtained from Cevadilla, not quite pure.

Pale grey, amorphous, pulverulent masses, powerfully irritating the nostrils, strongly and persistently bitter, and highly acrid and poisonous.

Tests.—Concentrated Sulphuric Acid forms a deep-red solution, which exhibits a green fluorescence by reflected light. Warmed with Hydrochloric Acid, it dissolves with the production of a blood-red colour. Leaves no residue on ignition.

Solubility: scarcely soluble in cold water; 1 in 1000 of boiling water; 1 in 3 of Rectified Spirit; 1 in 6 of Ether; 1 in 3 of Chloroform; sparingly in Glycerine; about 1 in 80 of Olive Oil; and readily in diluted acids.

Medicinal Properties.

A powerful emetic and drastic purgative. Rarely given internally. Used externally in neuralgia, in chronic swellings, stiffening or induration of the joints. It should not be used where the skin is broken.

(In all the Pharmacopœias.)

Preparation.

UNGUENTUM VERATRINÆ. Light fawn. [ALTERED.]

Veratrine, 8 grs.; Hard Paraffin, ¼ oz.; Soft Paraffin, ¾ oz.; Olive Oil, 1 fl. drm.: rub the Veratrine and the Oil together; melt the Hard and Soft Paraffins together, and when in cooling they begin to thicken, mix the whole thoroughly in a mortar until cold.

=(7 grs. in the oz.).

Now made with the Paraffins in place of Lard.

(U.S. 1 in 26½; Russ. 1 in 90; not in the others.)

VERATRI VIRIDIS RHIZOMA.

GREEN HELLEBORE RHIZOME.

The rhizome and rootlets of *Veratrum viride*, dried.

Collected in autumn in U.S. and Canada.

Medicinal Properties.

Emetic. It increases most of the secretions; diminishes the frequency of the pulse, and reduces the respirations; when freely taken, powerfully influences the nervous system, occasioning faintness and loss of power, with dilatation of the pupils. Best adapted to gout, rheumatism, and neuralgic affections; should be cautiously prescribed.

Dose.—4 to 6 grs. of the powder.

Preparation.

TINCTURA VERATRI VIRIDIS. Deep brown.

Green Hellebore Rhizome, in No. 40 powder, 4; Rectified Spirit, 20: macerate the powder with 15 of the spirit forty-eight hours, agitating occasionally, pack it in a percolator, let it drain, pour on the remainder of the spirit; when it ceases to drop, press, filter, and add Rectified Spirit to make 20. =(1 in 5).

Dose.—5 to 20 minims.

(U.S. American Hellebore, 1 in 1; not in the others.)

VINA.

WINES.

Medicated Wines are of very ancient date, and were admitted into our earliest Pharmacopœias. Two only remain as representatives of the old Pharmacopœias—Vinum Antimonii and V. Ferri; the former was prepared by digesting 4 ounces of the Regulus of Antimony in powder with 3 pounds of "White" Wine (Pharmacopœia Londinensis, 1655). The latter (Vinum Chalybeatum) was made with Rhenish Wine and iron filings.

The following are the Wines of the British Pharmacopœia, the formulas for which will be found under the names of the drugs from which they are prepared:—

Dose.		Proportion of active ingredient in the whole.
1 drm.	VINUM ALOES	1 in 26½
15 mins.	VINUM ANTIMONIALE	2 grs. to 1 oz.
	VINUM AURANTII	British Orange Wine.
20 mins.	VINUM COLCHICI	(Corm) 1 in 5.
1 drm.	VINUM FERRI	made with Iron Wire.
1 drm.	VINUM FERRI CITRATIS	8 grs. to 1 oz.
5 mins.	VINUM IPECACUANHÆ	1 in 20.
15 mins.	VINUM OPII	Ext. Opium 1 in 20.
½ oz.	VINUM QUININÆ	1 gr. to 1 oz.
1 drm.	VINUM RHEI	1 in 13⅓.
	VINUM XERICUM.	

VINUM XERICUM.

SHERRY.

A pale brown Spanish Wine, containing about seventeen per cent. of Alcohol. Unless good sound Sherry is used, the preparations are apt to spoil by keeping.

All Medicinal Wines are made with Sherry, except Vin. Ferri Citratis and Vinum Quininæ, which are made with British Orange Wine.

For the amount of Alcohol in the several wines most commonly drunk in England, *see* "Spiritus."

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

ZINCUM.

ZINC.

Zn. eq. 65.

[illegible] A bluish-white metal, of peculiar taste and of a perceptible smell when rubbed; laminated, and with a crystalline fracture.

It occurs native as a Sulphide or as a Carbonate, and is separated from impurities by sublimation.

ZINCUM GRANULATUM.

GRANULATED ZINC.

Fuse Zinc of Commerce in an earthen crucible, heated to a sufficient degree to melt the Zinc, but not to produce combustion; pour it in a very thin stream into a bucket of cold water; afterwards dry the Zinc.

Used to prepare Liquor Zinci Chloridi, Zinci Chloridum, Zinci Sulphas.

The British Pharmacopœia contains the following preparations of Zinc.

ZINCI ACETAS.
ZINCI CARBONAS.
ZINCI CHLORIDUM.
ZINCI OXIDUM.
ZINCI SULPHAS.
ZINCI SULPHOCARBOLAS.
ZINCI VALERIANAS.

Incompatibles of Zinc Salts are,—Alkalies and their Carbonates, Lime Water, Acetate of Lead, Nitrate of Silver, Astringent Vegetable Infusions or Decoctions, and Milk.

Antidotes. In case of poisoning with the Salts of Zinc, Carbonate of Sodium or Carbonate of Potassium in large quantities dissolved in warm water, Milk and Eggs freely, Tannic Acid or Strong Tea, Laudanum, Linseed Meal Poultices to abdomen. If much pain in the abdomen, an enema of gruel, or starch and water may be given. (Murrell.)

ZINCI ACETAS.

ACETATE OF ZINC.

$Zn(C_2H_3O_2)_2.\ 2H_2O$, eq. 219.

Thin, translucent, and colourless crystalline plates, of pearly lustre.

Solubility: 10 in 25 of Water; 4 in 1 of boiling Water; 1 in 40 of Rectified Spirit; 1 in 3 of boiling Rectified Spirit.

Tests.—A dilute watery solution is not affected by Chloride of Barium or by Nitrate of Silver (absence of Sulphates and Chlorides); and when slightly acidulated with Hydrochloric Acid is not precipitated by Sulphuretted Hydrogen (absence of Cadmium and Lead). After it has been boiled for a few minutes with a little Nitric Acid, it yields with Ammonia a white precipitate, entirely soluble without colour in an excess of the reagent (absence of Iron).

Medicinal Properties.

Astringent. Similar to the Sulphate.

Dose.—1 to 2 grs. as a tonic, 10 to 20 grs. as an emetic.

(Austr. Belg. Dan. Fr. Ger. Russ. and U.S.)

Not Official.

Lotio.—Acetate of Zinc, 1 to 2 grs.; Water, 1 oz.: mix.

An astringent collyrium in ophthalmia, or as an injection in gonorrhœa after the acute stage has passed.

Tincture or Wine of Opium causes no precipitate with this Lotion.

Not Official.

ZINCI BROMIDUM.

A whitish granular powder, very deliquescent.
Soluble 4 in 1 of Water; 2 in 1 of Rectified Spirit.

(U.S.; not in the other Pharmacopœias.)

Dose.—2 grs. three times a day as a tonic.

ZINCI CARBONAS.

CARBONATE OF ZINC.

$(ZnCO_3(Zn2HO)_2, H_2O$, eq. 341.

A white, tasteless, inodorous powder.

Insoluble in water.

Tests.—Its solution in diluted Nitric Acid is not precipitated by Chloride of Barium (indicating absence of Sulphate), or Nitrate of Silver (absence of Chloride), and gives with Carbonate of Ammonium a white precipitate (Carbonate of Zinc), entirely soluble without colour in an excess of the reagent (absence of Iron).

Medicinal Properties.

Same as those of the Oxide of Zinc.

Dose.—2 to 10 grs.

(U.S. Zinci Carbonas Præcipitatus; not in the others.)

ZINCI CHLORIDUM.

CHLORIDE OF ZINC.

$ZnCl_2$, eq. 136.

In colourless opaque rods or tablets, very deliquescent and caustic.

Solubility: 10 in 4 of Water; 1 in 1 of Rectified Spirit; freely in Ether; 1 in 4 (nearly) of Glycerine.

Test.—Its watery solution is not affected by Chloride of Barium (indicating absence of Sulphuric Acid), or by Oxalate of Ammonium (absence of Calcium), and is not tinged blue by the Ferrocyanide or Ferricyanide of Potassium (absence of Iron). Ammonia throws down a white precipitate entirely soluble in an excess of the reagent.

Medicinal Properties.

Internally, a weak solution is alterative and tonic; externally, applied as a caustic to malignant sores, bleeding cancer, either mixed with an equal proportion of flour or alone, and as it liquefies, sprinkle with plaster of Paris to prevent its spreading, care being taken that it does not come in contact with the edges of the skin. 5 grs. to 1 oz. of water as a wash for the mouth.

Dose.—½ to 1 gr.

Solution for Gaiffe's galvanic apparatus, 1 drm. Chloride of Zinc to 2 oz. of distilled water, and filtered.

(Austr. Ger. and Russ. Zincum Chloratum; Belg. Chloruretum Zinci; Dan. Chloretum Zincicum; Fr. Chlorure de Zinc; U.S. Zinci Chloridum).

Preparation.

LIQUOR ZINCI CHLORIDI. Colourless.

Granulated Zinc, 8; Hydrochloric Acid, 22; Solution of Chlorine, *q. s.;* Carbonate of Zinc, ¼; Distilled Water, 10. Mix the Acid and Water in a porcelain dish, add the Zinc, and apply a gentle heat to promote the action until gas is no longer evolved; boil for half an hour, supplying the water lost by evaporation, and allow the product to cool. Test a few drops of the resulting liquid for Iron or Lead by adding excess of Ammonia and then Sulphydrate of Ammonium, when a black precipitate is produced if either is present. In the latter case filter the remainder into a bottle, and add solution of Chlorine by degrees, with frequent agitation, until the fluid acquires a permanent odour of Chlorine. Add the Carbonate of Zinc, in small quantities at a time, and with renewed agitation, until a brown sediment appears, and the whole of the Iron or Lead is thus precipitated.

Filter the liquid into a porcelain basin, and evaporate until it is reduced to the bulk of 20. If no Iron or Lead be present, filter and evaporate to 20 at once.

A colourless fluid, with an astringent and sweetish taste.

Sp. gr. 1·460.

Should answer to the tests of purity for Zinci Chloridum.

(U.S. sp. g. 1·555; not in the other Pharmacopœias.)

ANTIDOTES.—In case of poisoning with Chloride of Zinc, Carbonate of Sodium, warm demulcent drinks (*vide* Zincum, page 354).

(Sir W. Burnett's Disinfecting Solution, sp. g. 2·000.)

Oxide of Zinc, mixed with an equal weight of Chloride of Zinc, will preserve the latter dry enough to blow through a tube into any cavity required, and may be so kept in a bottle for a long time.

CHLORIDE OF ZINC POINTS.—Chloride of Zinc, 1; Oxide of Zinc, 1; Wheat Flour, 2; Water to make a stiff paste, which is formed into caustic points for cancer.

ZINCI OXIDUM.

OXIDE OF ZINC.

ZnO, eq. 81.

A soft, white, tasteless, and inodorous powder.

Insoluble in water.

Tests.—Dissolves without effervescence in diluted Nitric Acid, forming a solution which is not affected by Chloride of Barium (absence of Sulphates), or Nitrate of Silver (absence of Chlorides), or diluted Sulphuric Acid (absence of Lead), and gives, with Carbonate of Ammonium, a white precipitate which dissolves entirely without colour in an excess of the reagent.

Medicinal Properties.

Internally as a tonic, especially in spasmodic affections. Astringent and absorbent, employed externally, in the form of powder or ointment, to slight excoriations and ulcerations.

Dose.—2 to 10 grs.

(In all the Pharmacopœias; Fr. by the dry as well as the humid process.)

Makes into pills with Conf. Rosæ Caninæ.

Preparation.

UNGUENTUM ZINCI. Cream.

Oxide of Zinc, in very fine powder, 80 grs.; Benzoated Lard, 1 oz.: mix. Add the Oxide to the melted Lard, and stir till cool.

=(1 in 6½).

(U.S. 1 in 5; Fr. Pommade, Belg. Dan. Ger. and Russ. 1 in 10; not in Austr.)

Applied to the feet once in twenty-four hours, prevents the unpleasant odour of perspiration.

Not Official.

Lapis Tutiæ.—Tutty, an impure Oxide of Zinc, used for eye lotions.

ZINCI SULPHAS.

SULPHATE OF ZINC.

$ZnSO_4 . 7H_2O$, eq. 287.

In colourless, transparent, prismatic crystals, with a strong metallic styptic taste.

Solubility: 10 in 7 of water. Insoluble in Rectified Spirit.

Tests.—Its watery solution is not tinged purple by Tincture of Galls—indicating absence of Iron; and when acidulated with Sulphuric or Hydrochloric Acid, gives no precipitate with Sulphuretted Hydrogen—indicating absence of Lead, Cadmium, and Copper. After it has been boiled for a few minutes with a little Nitric Acid, it yields with Ammonia a white precipitate, which is entirely soluble without colour in an excess of the reagent.

Medicinal Properties.

In small doses tonic and astringent; chiefly employed in spasmodic diseases, as epilepsy, chorea, tussis, &c.; in large doses a prompt emetic, if the head be kept cold. As an astringent, chiefly externally; as an injection in fluor albus and in the advanced stages of gonorrhœa; and as a collyrium in ophthalmia, or a wash for indolent ulcers. It is also used as a styptic.

Dose.—As a tonic or astringent, 1 to 2 grs.; emetic, 10 to 30 grs.; an injection or Collyrium may be made with 1 to 3 grs. to an ounce of water.

(In all the Pharmacopœias; Austr. Ger. and Russ. Z. Sulphuricum; Belg.

Sulphas Zinci; Dan. Sulphas Zincicus; Fr. Sulfate de Zinc; U.S. Zinci Sulphas.)

Tincture or Wine of Opium causes no precipitate with Solutions of Zinc.

Not Official.

Sticks of fused Sulphate of Zinc.—Astringent, applied to suppurating surfaces.

ZINCI SULPHOCARBOLAS.

SULPHOCARBOLATE OF ZINC.

$Zn(C_6H_5SO_4)_2, H_2O$, eq. 429.

[NEW.]

Transparent tabular crystals.

Now included in B. P.; was a Not Official in Companion 1869.

Soluble 1 in 2 of Water; 3 in 1 of boiling Water; 1 in 2½ of Rectified Spirit.

Tests.—The aqueous solution is coloured violet by Perchloride of Iron, and gives a white precipitate with Sulphydrate of Ammonium; it is not at once rendered turbid, or is rendered only faintly turbid by Chloride of Barium (trace of Sulphate), and is not precipitated by Oxalate of Ammonium (absence of Barium and Calcium).

(Ger. and Russ. Zincum sulphocarbolicum; not in the others.)

Medicinal Properties.

Astringent and antiseptic.

For leucorrhœa or gonorrhœa, 60 grs. dissolved in a pint of Water for vaginal injection.

ZINCI VALERIANAS.

VALERIANATE OF ZINC.

$Zn(C_5H_9O_2)_2$, eq. 267.

In bright white, pearly, tabular crystals, with a feeble odour of Valerianic Acid and a metallic taste.

Solubility, 1 in 120 of water; 1 in 60 of Rectified Spirit; 1 in 500 of Ether.

Tests.—Its solution in hot Water is only faintly precipitated by Chloride of Barium (trace of Sulphate.) It gives, when heated with diluted Sulphuric Acid, a distillate (Valerianic Acid), which, when mixed with solution of Acetate of Copper, does not immediately affect the transparency of the fluid (indicating absence of Butyric Acid), but forms after a little time oily drops, which gradually pass into a bluish-white crystalline deposit (Valerianate of Copper).

Medicinal Properties.

Antispasmodic, chiefly used in chorea, epilepsy, and in various neuralgic and hysterical affections. As a topical astringent in chronic conjunctivitis, as a collyrium, 1 or 2 grains to 1 ounce of water.

Dose.—1 to 6 grs. or more, either in pill or solution.

(Belg. Fr. Russ. and U.S.; not in Austr. Dan. or Ger.)

Incompatibles.—All acids, soluble carbonates, most metallic salts, vegetable astringents.

ZINGIBER.

GINGER.

The scraped and dried rhizome of *Zingiber officinale;* from plants cultivated in the West Indies, India, and other countries.

Medicinal Properties.

Aromatic, stimulant, and carminative. It is given in dyspepsia, flatulency, and as an adjunct to purgative medicines. Used as a gargle in cases of relaxed uvula and tonsils.

Dose.—In powder, 10 to 20 grs.

(In all the Pharmacopœias; Fr. Gingembre.)

Contained in Conf. Opii, Conf. Scammonii, Inf. Sennæ, Pil. Scillæ Comp., Pulv. Cinnam. Comp., Pulv. Jalapæ Comp., Pulv. Opii Comp., Pulv. Rhei Comp., Pulv. Scammonii Comp., Syrupus Rhamni, Vin. Aloes.

Preparations.

SYRUPUS ZINGIBERIS. Straw colour; opaque; crystallizes much on keeping.

Strong Tincture of Ginger, 6 drms.; Syrup, 19 oz.: mix. =(about 1 in 26).

Dose.—1 to 4 drms.

(U.S. with Fluid Extract; Russ. from root, 1 in 20; not in the others.)

TINCTURA ZINGIBERIS. Pale reddish-brown.

Ginger, bruised, 1; Rectified Spirit, 8: macerate the Ginger forty-eight hours in 6 of the spirit, agitating occasionally; pack in a percolator, let it drain, pour on the remaining spirit, and when it ceases to drop, press, filter, and add Rectified Spirit to make 8. =(1 in 8).

Dose.—10 to 60 mins.

(Belg. Fr. Ger. Russ. and U.S. 1 in 5; all by weight; not in Austr. or Dan.)

TINCTURA ZINGIBERIS FORTIOR. Reddish-brown. *Syn.* Essentia Zingiberis.

Ginger, in powder, 10; Rectified Spirit, sufficient to percolate 20. Pack the Ginger tightly in a percolator, and pour over it carefully half of the Spirit, and after two hours add the remainder and as much more as is required to percolate 20. =(1 in 2).

Dose.—5 to 20 minims.

Contained in Syrup of Ginger = (1 in 26).

Not Official.

OLEORESINA ZINGIBERIS. U.S.

Ginger, in No. 60 powder, 10; Stronger Ether, *q. s.* Press the Ginger firmly in a percolator, pour on the Ether, and when that has been absorbed, add Ether until 15 ounces have slowly passed or until the Ginger is exhausted. Recover the greater part of the Ether by distillation, and expose the residue until the remaining Ether has evaporated.

		Proportion of active ingredients in the mass.
UNGUENTUM HYDRARGYRI OXIDI RUBRI		1 in 8.
UNGUENTUM HYDRARGYRI SUBCHLORIDI		1 in 6½.
UNGUENTUM IODI	(Iodine)	1 in 31.
UNGUENTUM IODOFORMI		1 in 10.
UNGUENTUM PICIS LIQUIDÆ		5 in 7.
UNGUENTUM PLUMBI ACETATIS		1 in 37½.
UNGUENTUM PLUMBI CARBONATIS		1 in 8.
UNGUENTUM PLUMBI IODIDI		1 in 8.
UNGUENTUM POTASSÆ SULPHURATÆ		1 in 15½.
UNGUENTUM POTASSII IODIDI	about	1 in 8¾.
UNGUENTUM RESINÆ		1 in 3¾.
UNGUENTUM SABINÆ	nearly	1 in 2½.
UNGUENTUM SIMPLEX.		
UNGUENTUM STAPHISAGRIÆ	about	1 in 2¼.
UNGUENTUM SULPHURIS		1 in 5.
UNGUENTUM SULPHURIS IODIDI		1 in 15½.
UNGUENTUM TEREBINTHINÆ	(Oil)	1 in 2⅛.
UNGUENTUM VERATRINÆ		1 in 63.
UNGUENTUM ZINCI		1 in 6½.
UNGUENTUM ZINCI OLEATI		1 in 2.

Ointments which are not official are enumerated in the Index.

Not Official.

URETHANE.

$C_3H_7NO_2$.

The Ethylic Ether of Carbaminic Acid.
In white crystals, free from odour.
Soluble 1 in 2 of Water; 1 in 1 of Rectified Spirit; 2 in 3 of Ether.

Medicinal Properties.

Hypnotic and sedative.

Dose.—15 grs., or 8 grs. repeated after two or three hours.—*Brit. Med. Jl.*, ii., 1885, p. 611, and i., 1886, pp. 343, 354.

UVÆ.

RAISINS.

The ripe fruit of the Grape Vine, *Vitis vinifera*, dried in the sun or with artificial heat. Imported from Spain.

(Fr. Raisin; not in the other Pharmacopœias.)

Medicinal Properties.

Nutritious and demulcent. Principally used as a flavouring agent.

Contained in Tinct. Cardam. Comp., Tinct. Sennæ.

UVÆ URSI FOLIA.

BEARBERRY LEAVES.

The dried leaves of *Arctostaphylos Uva ursi*, from indigenous plants.

(Austr.; Belg.; Fr. Busserole; Dan.; Ger.; Russ.; and U.S.)

Medicinal Properties.

Astringent and tonic, with a direct influence on the kidneys and urinary organs. Used in menorrhagia and diabetes, also in chronic dysentery.

Dose.—Of the powdered leaf, 10 to 30 grs.

Preparation.

INFUSUM UVÆ URSI.

Bearberry Leaves, bruised, 1; boiling Distilled Water, 20: infuse one hour, and strain. =(1 in 20).

Dose.—1 to 2 oz.

In the 1864 Pharmacopœia the leaves were not ordered to be bruised; *when bruised*, the infusion is stronger, but a large deposit forms from the strained fluid.

(Not in the other Pharmacopœias.)

INCOMPATIBLES.—Iron Salts, Lead Salts, Nitrate of Silver, Vegetable Alkaloids, Gelatine.

VALERIANÆ RHIZOMA.

VALERIAN RHIZOME.

The root of *Valeriana officinalis*, indigenous and cultivated in Britain, collected in autumn and dried; that from wild plants growing on dry soil preferred.

Medicinal Properties.

It is a nervous stimulant and antispasmodic. Useful in hysteria and nervous diseases; also in chorea and epilepsy; and as an adjunct to tonics.

Dose.—10 to 30 grs. of the powder.

(In all the Pharmacopœias.)

Preparations.

INFUSUM VALERIANÆ.

Valerian Rhizome, bruised, ¼ oz.; boiling Distilled Water, 10 oz.: infuse one hour, and strain. =(about 1 in 40).

Dose.—1 to 2 oz.

(Fr. Tisane, 1 in 100; not in the other Pharmacopœias.)

TINCTURA VALERIANÆ. Intense reddish-brown.

Valerian Rhizome, in No 40 powder, 1; Proof Spirit, 8: macerate the Valerian forty-eight hours with 6 of the spirit, agitating occasionally; pack in a percolator, let it drain, pour on the remainder of the spirit; when it ceases to drop, press and filter, and add proof spirit to make 8. =(1 in 8).

Dose.—1 to 2 drms.

(Austr. Belg. Dan. Fr. Ger. Russ. and U.S. 1 in 5; all by weight.)

TINCTURA VALERIANÆ AMMONIATA. Intense reddish-brown. [MODIFIED.]

Valerian Rhizome, in No. 40 powder, 1; Aromatic Spirit of Ammonia, 8: macerate the Valerian seven days, strain, press, filter, and add Aromatic Spirit of Ammonia to make 8. =(1 in 8).

The formula for Aromatic Spirit of Ammonia has been altered.

Dose.—½ to 1 drm.

(U.S. 1 in 5; not in the others.)

Not Official.

TINCTURA VALERIANÆ ÆTHEREA.

Belg. Dan. and Ger. Bruised Valerian 1, Spirit of Ether 5, by weight: macerate eight days.

Fr. Powdered Valerian 1, Ether (sp. g. ·758) 5, by percolation.

VAPORES.

INHALATIONS.

VAPOR ACIDI HYDROCYANICI, 10 to 15 minims, and 1 drm. cold Water.

VAPOR CHLORI, Chlorinated Lime, 2 oz.; cold Water, a sufficiency.

VAPOR CONINÆ, Juice of Hemlock, ½ oz.; Solution of Potash, 1 drm.; Water, 1 oz.: of this mixture use 20 minims and hot Water.

VAPOR CREASOTI, 12 minims, in 8 oz. boiling Water.

VAPOR IODI, Tincture of Iodine, 1 drm.; Water, 1 oz.: apply a gentle heat.

VAPOR PINI SYLVESTRIS, 5 minims; Light Carbonate of Magnesium, 2½ grs.; Water, 1 drm.

VERATRINA.

VERATRINE.

An alkaloid, or mixture of alkaloids, obtained from Cevadilla, not quite pure.

Pale grey, amorphous, pulverulent masses, powerfully irritating the nostrils, strongly and persistently bitter, and highly acrid and poisonous.

Tests.—Concentrated Sulphuric Acid forms a deep-red solution, which exhibits a green fluorescence by reflected light. Warmed with Hydrochloric Acid, it dissolves with the production of a blood-red colour. Leaves no residue on ignition.

Solubility: scarcely soluble in cold water; 1 in 1000 of boiling water; 1 in 3 of Rectified Spirit; 1 in 6 of Ether; 1 in 3 of Chloroform; sparingly in Glycerine; about 1 in 80 of Olive Oil; and readily in diluted acids.

Medicinal Properties.

A powerful emetic and drastic purgative. Rarely given internally. Used externally in neuralgia, in chronic swellings, stiffening or induration of the joints. It should not be used where the skin is broken.

(In all the Pharmacopœias.)

Preparation.

UNGUENTUM VERATRINÆ. Light fawn. [ALTERED.]

Veratrine, 8 grs.; Hard Paraffin, ¼ oz.; Soft Paraffin, ¾ oz.; Olive Oil, 1 fl. drm.: rub the Veratrine and the Oil together; melt the Hard and Soft Paraffins together, and when in cooling they begin to thicken, mix the whole thoroughly in a mortar until cold.

=(7 grs. in the oz.).

Now made with the Paraffins in place of Lard.

(U.S. 1 in 26½; Russ. 1 in 90; not in the others.)

VERATRI VIRIDIS RHIZOMA.

GREEN HELLEBORE RHIZOME.

The rhizome and rootlets of *Veratrum viride*, dried.

Collected in autumn in U.S. and Canada.

Medicinal Properties.

Emetic. It increases most of the secretions; diminishes the frequency of the pulse, and reduces the respirations; when freely taken, powerfully influences the nervous system, occasioning faintness and loss of power, with dilatation of the pupils. Best adapted to gout, rheumatism, and neuralgic affections; should be cautiously prescribed.

Dose.—4 to 6 grs. of the powder.

Preparation.

TINCTURA VERATRI VIRIDIS. Deep brown.

Green Hellebore Rhizome, in No. 40 powder, 4; Rectified Spirit, 20: macerate the powder with 15 of the spirit forty-eight hours, agitating occasionally, pack it in a percolator, let it drain, pour on the remainder of the spirit; when it ceases to drop, press, filter, and add Rectified Spirit to make 20. =(1 in 5).

Dose.—5 to 20 minims.

(U.S. American Hellebore, 1 in 1; not in the others.)

VINA.

WINES.

Medicated Wines are of very ancient date, and were admitted into our earliest Pharmacopœias. Two only remain as representatives of the old Pharmacopœias—Vinum Antimonii and V. Ferri; the former was prepared by digesting 4 ounces of the Regulus of Antimony in powder with 3 pounds of "White" Wine (Pharmacopœia Londinensis, 1655). The latter (Vinum Chalybeatum) was made with Rhenish Wine and iron filings.

The following are the Wines of the British Pharmacopœia, the formulas for which will be found under the names of the drugs from which they are prepared:—

Dose.		Proportion of active ingredient in the whole.
1 drm.	VINUM ALOES	1 in 26½
15 mins.	VINUM ANTIMONIALE	2 grs. to 1 oz.
	VINUM AURANTII	British Orange Wine.
20 mins.	VINUM COLCHICI	(Corm) 1 in 5.
1 drm.	VINUM FERRI	made with Iron Wire.
1 drm.	VINUM FERRI CITRATIS	8 grs. to 1 oz.
5 mins.	VINUM IPECACUANHÆ	1 in 20.
15 mins.	VINUM OPII	Ext. Opium 1 in 20.
½ oz.	VINUM QUININÆ	1 gr. to 1 oz.
1 drm.	VINUM RHEI	1 in 13⅓.
	VINUM XERICUM.	

VINUM XERICUM.

SHERRY.

A pale brown Spanish Wine, containing about seventeen per cent. of Alcohol. Unless good sound Sherry is used, the preparations are apt to spoil by keeping.

All Medicinal Wines are made with Sherry, except Vin. Ferri Citratis and Vinum Quininæ, which are made with British Orange Wine.

For the amount of Alcohol in the several wines most commonly drunk in England, *see* "Spiritus."

Not Official.

VINCA MAJOR.

GREAT PERIWINKLE.

An infusion made of 2 oz. of dried herb to 20 oz. boiling water, and strained when cold, is powerfully astringent.

Dose.—A wineglassful drunk as frequently as required will arrest menorrhagia when other remedies have failed.

Ext. Vincæ Majoris Liquidum, made from the expressed juice of the plant of such strength that 1½ drms. are equal to 2 oz. of the infusion.

Dose.—1 to 2 drms. in water.

The latter preparation keeps well, and is the best to prescribe.

ZINCUM.

ZINC.

Zn, eq. 65.

Sp. g. 7·1; fuses at 773° F. A bluish-white metal, of peculiar taste and of a perceptible smell when rubbed; laminated, and with a crystalline fracture.

It occurs native, as a Sulphide or as a Carbonate, and is separated from impurities by sublimation.

ZINCUM GRANULATUM.

GRANULATED ZINC.

Fuse Zinc of Commerce in an earthen crucible, heated to a sufficient degree to melt the Zinc, but not to produce combustion; pour it in a very thin stream into a bucket of cold water; afterwards dry the Zinc.

Used to prepare Liquor Zinci Chloridi, Zinci Chloridum, Zinci Sulphas.

The British Pharmacopœia contains the following preparations of Zinc:—

ZINCI ACETAS.
ZINCI CARBONAS.
ZINCI CHLORIDUM.
ZINCI OXIDUM.
ZINCI SULPHAS.
ZINCI SULPHOCARBOLAS.
ZINCI VALERIANAS.

Incompatibles of Zinc Salts are,—Alkalies and their Carbonates, Lime Water, Acetate of Lead, Nitrate of Silver, Astringent Vegetable Infusions or Decoctions, and Milk.

Antidotes.—In case of poisoning with the Salts of Zinc, Carbonate of Sodium or Carbonate of Potassium in large quantities dissolved in warm water, Milk and Eggs freely, Tannic Acid or Strong Tea, Laudanum, Linseed Meal Poultices to abdomen. If much pain in the abdomen, an enema of gruel, or starch and water may be given. (Murrell.)

ZINCI ACETAS.

ACETATE OF ZINC.

$\mathbf{Zn(C_2H_3O_2)_2.\ 2H_2O}$, eq. 219.

Thin, translucent, and colourless crystalline plates, of pearly lustre.

Solubility: 10 in 25 of Water; 4 in 1 of boiling Water; 1 in 40 of Rectified Spirit; 1 in 3 of boiling Rectified Spirit.

Tests.—A dilute watery solution is not affected by Chloride of Barium or by Nitrate of Silver (absence of Sulphates and Chlorides); and when slightly acidulated with Hydrochloric Acid is not precipitated by Sulphuretted Hydrogen (absence of Cadmium and Lead). After it has been boiled for a few minutes with a little Nitric Acid, it yields with Ammonia a white precipitate, entirely soluble without colour in an excess of the reagent (absence of Iron).

Medicinal Properties.

Astringent. Similar to the Sulphate.

Dose.—1 to 2 grs. as a tonic, 10 to 20 grs. as an emetic.

(Austr. Belg. Dan. Fr. Ger. Russ. and U.S.)

Not Official.

Lotio.—Acetate of Zinc, 1 to 2 grs.; Water, 1 oz.: mix.

An astringent collyrium in ophthalmia, or as an injection in gonorrhœa after the acute stage has passed.

Tincture or Wine of Opium causes no precipitate with this Lotion.

Not Official.

ZINCI BROMIDUM.

A whitish granular powder, very deliquescent.
Soluble 4 in 1 of Water; 2 in 1 of Rectified Spirit.

(U.S.; not in the other Pharmacopœias.)

Dose.—2 grs. three times a day as a tonic.

ZINCI CARBONAS.

CARBONATE OF ZINC.

$(ZnCO_3(Zn2HO)_2, H_2O$, eq. 341.

A white, tasteless, inodorous powder.
Insoluble in water.

Tests.—Its solution in diluted Nitric Acid is not precipitated by Chloride of Barium (indicating absence of Sulphate), or Nitrate of Silver (absence of Chloride), and gives with Carbonate of Ammonium a white precipitate (Carbonate of Zinc), entirely soluble without colour in an excess of the reagent (absence of Iron).

Medicinal Properties.

Same as those of the Oxide of Zinc.

Dose.—2 to 10 grs.

(U.S. Zinci Carbonas Præcipitatus; not in the others.)

ZINCI CHLORIDUM.

CHLORIDE OF ZINC.

$ZnCl_2$, eq. 136.

In colourless opaque rods or tablets, very deliquescent and caustic.

Solubility: 10 in 4 of Water; 1 in 1 of Rectified Spirit; freely in Ether; 1 in 4 (nearly) of Glycerine.

Test.—Its watery solution is not affected by Chloride of Barium (indicating absence of Sulphuric Acid), or by Oxalate of Ammonium (absence of Calcium), and is not tinged blue by the Ferrocyanide or Ferricyanide of Potassium (absence of Iron). Ammonia throws down a white precipitate entirely soluble in an excess of the reagent.

Medicinal Properties.

Internally, a weak solution is alterative and tonic; externally, applied as a caustic to malignant sores, bleeding cancer, either mixed with an equal proportion of flour or alone, and as it liquefies, sprinkle with plaster of Paris to prevent its spreading, care being taken that it does not come in contact with the edges of the skin. 5 grs. to 1 oz. of water as a wash for the mouth.

Dose.—½ to 1 gr.

Solution for Gaiffe's galvanic apparatus, 1 drm. Chloride of Zinc to 2 oz. of distilled water, and filtered.

(Austr. Ger. and Russ. Zincum Chloratum; Belg. Chloruretum Zinci; Dan. Chloretum Zincicum; Fr. Chlorure de Zinc; U.S. Zinci Chloridum).

Preparation.

LIQUOR ZINCI CHLORIDI. Colourless.

Granulated Zinc, 8; Hydrochloric Acid, 22; Solution of Chlorine, *q. s.*; Carbonate of Zinc, ¼; Distilled Water, 10. Mix the Acid and Water in a porcelain dish, add the Zinc, and apply a gentle heat to promote the action until gas is no longer evolved; boil for half an hour, supplying the water lost by evaporation, and allow the product to cool. Test a few drops of the resulting liquid for Iron or Lead by adding excess of Ammonia and then Sulphydrate of Ammonium, when a black precipitate is produced if either is present. In the latter case filter the remainder into a bottle, and add solution of Chlorine by degrees, with frequent agitation, until the fluid acquires a permanent odour of Chlorine. Add the Carbonate of Zinc, in small quantities at a time, and with renewed agitation, until a brown sediment appears, and the whole of the Iron or Lead is thus precipitated.

Filter the liquid into a porcelain basin, and evaporate until it is reduced to the bulk of 20. If no Iron or Lead be present, filter and evaporate to 20 at once.

A colourless fluid, with an astringent and sweetish taste.

Sp. gr. 1·460.

Should answer to the tests of purity for Zinci Chloridum.

(U.S. sp. g. 1·555; not in the other Pharmacopœias.)

Antidotes.—In case of poisoning with Chloride of Zinc, Carbonate of Sodium, warm demulcent drinks (*vide* Zincum, page 354).

(Sir W. Burnett's Disinfecting Solution, sp. g. 2·000.)

Oxide of Zinc, mixed with an equal weight of Chloride of Zinc, will preserve the latter dry enough to blow through a tube into any cavity required, and may be so kept in a bottle for a long time.

Chloride of Zinc Points.—Chloride of Zinc, 1; Oxide of Zinc, 1; Wheat Flour, 2; Water to make a stiff paste, which is formed into caustic points for cancer.

ZINCI OXIDUM.

OXIDE OF ZINC.

ZnO, eq. 81.

A soft, white, tasteless, and inodorous powder.

Insoluble in water.

Tests.—Dissolves without effervescence in diluted Nitric Acid, forming a solution which is not affected by Chloride of Barium (absence of Sulphates), or Nitrate of Silver (absence of Chlorides), or diluted Sulphuric Acid (absence of Lead), and gives, with Carbonate of Ammonium, a white precipitate which dissolves entirely without colour in an excess of the reagent.

Medicinal Properties.

Internally as a tonic, especially in spasmodic affections. Astringent and absorbent, employed externally, in the form of powder or ointment, to slight excoriations and ulcerations.

Dose.—2 to 10 grs.

(In all the Pharmacopœias; Fr. by the dry as well as the humid process.)

Makes into pills with Conf. Rosæ Caninæ.

Preparation.

UNGUENTUM ZINCI. Cream.

Oxide of Zinc, in very fine powder, 80 grs.; Benzoated Lard, 1 oz.: mix. Add the Oxide to the melted Lard, and stir till cool.

=(1 in 6½).

(U.S. 1 in 5; Fr. Pommade, Belg. Dan. Ger. and Russ. 1 in 10; not in Austr.)

Applied to the feet once in twenty-four hours, prevents the unpleasant odour of perspiration.

Not Official.

Lapis Tutiæ.—Tutty, an impure Oxide of Zinc, used for eye lotions.

ZINCI SULPHAS.

SULPHATE OF ZINC.

$ZnSO_4 . 7H_2O$, eq. 287.

In colourless, transparent, prismatic crystals, with a strong metallic styptic taste.

Solubility: 10 in 7 of water. Insoluble in Rectified Spirit.

Tests.—Its watery solution is not tinged purple by Tincture of Galls—indicating absence of Iron; and when acidulated with Sulphuric or Hydrochloric Acid, gives no precipitate with Sulphuretted Hydrogen—indicating absence of Lead, Cadmium, and Copper. After it has been boiled for a few minutes with a little Nitric Acid, it yields with Ammonia a white precipitate, which is entirely soluble without colour in an excess of the reagent.

Medicinal Properties.

In small doses tonic and astringent; chiefly employed in spasmodic diseases, as epilepsy, chorea, tussis, &c.; in large doses a prompt emetic, if the head be kept cold. As an astringent, chiefly externally; as an injection in fluor albus and in the advanced stages of gonorrhœa; and as a collyrium in ophthalmia, or a wash for indolent ulcers. It is also used as a styptic.

Dose.—As a tonic or astringent, 1 to 2 grs.; emetic, 10 to 30 grs.; an injection or Collyrium may be made with 1 to 3 grs. to an ounce of water.

(In all the Pharmacopœias; Austr. Ger. and Russ. Z. Sulphuricum; Belg.

Sulphas Zinci; Dan. Sulphas Zincicus; Fr. Sulfate de Zinc; U.S. Zinci Sulphas.)

Tincture or Wine of Opium causes no precipitate with Solutions of Zinc.

Not Official.

Sticks of fused Sulphate of Zinc.—Astringent, applied to suppurating surfaces.

ZINCI SULPHOCARBOLAS.

SULPHOCARBOLATE OF ZINC.

$Zn(C_6H_5SO_4)_2, H_2O$, eq. 429.

[NEW.]

Transparent tabular crystals.

Now included in B. P.; was a Not Official in Companion 1869.

Soluble 1 in 2 of Water; 3 in 1 of boiling Water; 1 in 2½ of Rectified Spirit.

Tests.—The aqueous solution is coloured violet by Perchloride of Iron, and gives a white precipitate with Sulphydrate of Ammonium; it is not at once rendered turbid, or is rendered only faintly turbid by Chloride of Barium (trace of Sulphate), and is not precipitated by Oxalate of Ammonium (absence of Barium and Calcium).

(Ger. and Russ. Zincum sulphocarbolicum; not in the others.)

Medicinal Properties.

Astringent and antiseptic.

For leucorrhœa or gonorrhœa, 60 grs. dissolved in a pint of Water for vaginal injection.

ZINCI VALERIANAS.

VALERIANATE OF ZINC.

$Zn(C_5H_9O_2)_2$, eq. 267.

In bright white, pearly, tabular crystals, with a feeble odour of Valerianic Acid and a metallic taste.

Solubility, 1 in 120 of water; 1 in 60 of Rectified Spirit; 1 in 500 of Ether.

Tests.—Its solution in hot Water is only faintly precipitated by Chloride of Barium (trace of Sulphate.) It gives, when heated with diluted Sulphuric Acid, a distillate (Valerianic Acid), which, when mixed with solution of Acetate of Copper, does not immediately affect the transparency of the fluid (indicating absence of Butyric Acid), but forms after a little time oily drops, which gradually pass into a bluish-white crystalline deposit (Valerianate of Copper).

Medicinal Properties.

Antispasmodic, chiefly used in chorea, epilepsy, and in various neuralgic and hysterical affections. As a topical astringent in chronic conjunctivitis, as a collyrium, 1 or 2 grains to 1 ounce of water.

Dose.—1 to 6 grs. or more, either in pill or solution.

(Belg. Fr. Russ. and U.S.; not in Austr. Dan. or Ger.)

Incompatibles.—All acids, soluble carbonates, most metallic salts, vegetable astringents.

ZINGIBER.

GINGER.

The scraped and dried rhizome of *Zingiber officinale;* from plants cultivated in the West Indies, India, and other countries.

Medicinal Properties.

Aromatic, stimulant, and carminative. It is given in dyspepsia, flatulency, and as an adjunct to purgative medicines. Used as a gargle in cases of relaxed uvula and tonsils.

Dose.—In powder, 10 to 20 grs.

(In all the Pharmacopœias; Fr. Gingembre.)

Contained in Conf. Opii, Conf. Scammonii, Inf. Sennæ, Pil. Scillæ Comp., Pulv. Cinnam. Comp., Pulv. Jalapæ Comp., Pulv. Opii Comp., Pulv. Rhei Comp., Pulv. Scammonii Comp., Syrupus Rhamni, Vin. Aloes.

Preparations.

SYRUPUS ZINGIBERIS. Straw colour; opaque; crystallizes much on keeping.

Strong Tincture of Ginger, 6 drms.; Syrup, 19 oz.: mix. =(about 1 in 26).

Dose.—1 to 4 drms.

(U.S. with Fluid Extract; Russ. from root, 1 in 20; not in the others.)

TINCTURA ZINGIBERIS. Pale reddish-brown.

Ginger, bruised, 1; Rectified Spirit, 8: macerate the Ginger forty-eight hours in 6 of the spirit, agitating occasionally; pack in a percolator, let it drain, pour on the remaining spirit, and when it ceases to drop, press, filter, and add Rectified Spirit to make 8. =(1 in 8).

Dose.—10 to 60 mins.

(Belg. Fr. Ger. Russ. and U.S. 1 in 5; all by weight; not in Austr. or Dan.)

TINCTURA ZINGIBERIS FORTIOR. Reddish-brown. *Syn.* Essentia Zingiberis.

Ginger, in powder, 10; Rectified Spirit, sufficient to percolate 20. Pack the Ginger tightly in a percolator, and pour over it carefully half of the Spirit, and after two hours add the remainder and as much more as is required to percolate 20. =(1 in 2).

Dose.—5 to 20 minims.

Contained in Syrup of Ginger = (1 in 26).

Not Official.

OLEORESINA ZINGIBERIS. U.S.

Ginger, in No. 60 powder, 10; Stronger Ether, *q. s.* Press the Ginger firmly in a percolator, pour on the Ether, and when that has been absorbed, add Ether until 15 ounces have slowly passed or until the Ginger is exhausted. Recover the greater part of the Ether by distillation, and expose the residue until the remaining Ether has evaporated.

APPENDIX.

I. ARTICLES EMPLOYED IN CHEMICAL TESTING.

BENZOL.

(C_6H_6.)

A colourless volatile liquid, obtained from coal tar. Specific gravity 0·85.

BENZOLATED AMYLIC ALCOHOL.

Mix together 3 volumes of Benzol with 1 of Amylic Alcohol; decant the supernatant fluid from any deposited Water.

CHLORIDE OF BARIUM.

($BaCl_2 . 2H_2O$.)

COPPER FOIL.

Pure Metallic Copper, thin and bright.

FERRICYANIDE OF POTASSIUM.

$K_6Fe_2C_{12}N_{12}$.

Test.—Its aqueous solution gives no precipitate with a dilute solution of a pure Ferric Salt.

GOLD, FINE.

Gold, free from metallic impurities.

HYPOSULPHITE OF SODIUM.

($Na_2S_2O_3$, $5H_2O$.)

Test.—24·8 grains decolorize 1000 grain-measures of the volumetric solution of Iodine.

INDIGO.

(C_8H_5NO.)

A blue pigment prepared from various species of *Indigofera*, Linn.

ISINGLASS.

The swimming-bladder or sound of various species of *Acipenser*, Linn., prepared and cut into fine shreds.

LITMUS.

A blue pigment prepared from various species of *Rocella*, DC.

LITMUS PAPER, BLUE.

Unsized white paper steeped in Solution of Litmus, and dried by exposure to the air.

LITMUS PAPER, RED.

Unsized white paper steeped in Solution of Litmus which has been previously reddened by the addition of a very minute quantity of Acid, and dried by exposure to the air.

OXALIC ACID OF COMMERCE.

Oxalic Acid ($H_2C_2O_4$, $2H_2O$.), not quite pure.

OXALATE OF AMMONIUM.

($(NH_4)_2C_2O_4$, H_2O.)

Take of Oxalic Acid, 1 oz.; boiling Distilled Water, 8 fl. oz. Carbonate of Ammonium, a sufficiency: dissolve the Oxalic Acid in the Water, neutralize the solution with the Carbonate of Ammonium at finally a boiling temperature, filter it while still hot, and set it by that crystals may form as it cools.

PETROLEUM SPIRIT. *Syn.* BENZOLINE; PETROLEUM ETHER.

A colourless, very volatile, and highly inflammable liquid obtained from Petroleum, and consisting of a mixture of the lower members of the Paraffin or Marsh-gas series of Hydrocarbons. Boiling point 122° to 140° F. (50° to 60° C.) Sp. g. about ·670 to ·700.

PHENOL-PHTHALEIN.

Produced by the reaction of Phenol and Phthalic Anhydride. Its Tincture yields an intense red colour with Potash or Soda, hence may be used as an indicator of the termination of volumetric reactions, especially those with organic acids.

PLATINUM BLACK.

Platinum in a state of minute division, obtained by adding excess of Carbonate of Sodium and some Sugar to solution of Perchloride of Platinum, and boiling till a black precipitate is formed, which is washed and dried.

PLATINUM FOIL.

SUBACETATE OF COPPER OF COMMERCE.

Verdigris.

SULPHATE OF COPPER, ANHYDROUS.

($CuSO_4$.)

Sulphate of Copper deprived of its water by a heat of 400° F. (204·4° C.).

Characters.—A yellowish-white powder, which becomes blue when moistened with water.

SULPHIDE OF IRON.

(FeS.)

Prepared by combining its elements in proper proportions by the aid of heat. Small quantities may be produced by applying the end of a rod of iron, heated to whiteness at a blacksmith's forge, to the end of a roll of Sulphur, and allowing the Sulphide of Iron, as it is formed, to run into a vessel of water.

SULPHURETTED HYDROGEN.

(H_2S.)

Take of Sulphide of Iron, ½ oz.; Water 4 fl. oz.; Sulphuric Acid, a sufficiency: place the Sulphide of Iron and the Water in a gas-bottle closed with a cork perforated by two holes, through one of which passes air-tight a funnel tube of sufficient length to dip into the water, and through the other a tube for giving exit to the gas. Through the former pour from time to time a little of the Acid, so as to develop the Sulphuretted Hydrogen as it may be required.

When the gas is employed, either in chemical testing or in the preparation of Acidum Hydrobromicum Dilutum, it should be washed by passing it through a similarly fitted bottle containing water.

TIN, GRANULATED.

Grain tin, reduced to small fragments by fusing, and immediately the tin is melted pouring it in a thin stream into cold water.

TURMERIC.

The dried Rhizome of *Curcuma longa*, Linn.

TURMERIC PAPER.

Unsized white paper steeped in Tincture of Turmeric, and dried by exposure to the air.

TURMERIC TINCTURE.

Take of Turmeric, bruised, 1 oz.; Rectified Spirit, 6 fl. oz.: macerate for seven days in a closed vessel, and filter.

II. TEST SOLUTIONS.

SOLUTION OF ACETATE OF COPPER.

Take of Subacetate of Copper of Commerce, in fine powder, ½ oz.; Acetic Acid, 1 fl. oz.; Distilled Water, a sufficiency: dilute the Acid with ½ fl. oz. of the Water; digest the Subacetate of Copper in the mixture, at a temperature not exceeding 212° F. (100° C.), with repeated stirring, and continue the heat until a dry residue is obtained. Digest this in 4 oz. of boiling Distilled Water, and by the addition of more of the Water make up the solution to 5 fl. oz. Filter it.

SOLUTION OF ACETATE OF POTASSIUM.

Take of Acetate of Potassium, ½ oz.; Distilled Water, 5 fl. oz.: dissolve and filter.

SOLUTION OF ACETATE OF SODIUM.

Take of Acetate of Sodium, ¼ oz.; Distilled Water, 5 fl. oz.: dissolve and filter.

SOLUTION OF ALBUMEN.

Take the White of one Egg; Distilled Water, 4 fl. oz.: mix by trituration in a mortar, and filter through clean tow first moistened with distilled water. This solution must be recently prepared.

SOLUTION OF AMMONIO-NITRATE OF SILVER.

Take of Nitrate of Silver, in crystals, ¼ oz.; Solution of Ammonia, ½ fl. oz., or a sufficiency; Distilled Water, a sufficiency: dissolve the Nitrate of Silver in 8 fl. oz. of Water, and to the solution add cautiously the Ammonia until the precipitate first formed is nearly dissolved. Clear the solution by filtration, and then add Distilled Water, so that the bulk may be 10 fl. oz.

SOLUTION OF AMMONIO-SULPHATE OF COPPER.

Take of Sulphate of Copper, in crystals, ½ oz.; Solution of Ammonia, a sufficiency; Distilled Water, a sufficiency: dissolve the Sulphate of Copper in 8 fl. oz. of water, and to the solution add cautiously the Ammonia until the precipitate first formed is nearly dissolved. Clear the solution by filtration, and then add Distilled Water, so that the bulk may be 10 fl. oz.

SOLUTION OF AMMONIO-SULPHATE OF MAGNESIUM.

Take of Sulphate of Magnesium, 1 oz.; Chloride of Ammonium, ½ oz.; Solution of Ammonia, ½ fl. oz.; Distilled Water, a sufficiency: dissolve the Sulphate of Magnesium and Chloride of Ammonium in 8 fl. oz. of the water, and to the solution add the Ammonia, and as much Distilled Water as will make up the bulk to 10 fl. oz. Filter it.

SOLUTION OF BORIC ACID.

Take of Boric Acid, 50 grs.; Rectified Spirit, 1 fl. oz.: dissolve and filter.

SOLUTION OF BROMINE.

Take of Bromine, 10 minims; Distilled Water, 5 fl. oz: place the Bromine in a bottle furnished with a well-fitting stopper, pour on the water, and shake several times. Keep it excluded from the light.

SOLUTION OF CARBONATE OF AMMONIUM.

Take of Carbonate of Ammonium, in small pieces, ½ oz.; Solution of Ammonia, ¾ fl. oz.; Distilled Water, 10 fl. oz.: dissolve and filter.

SOLUTION OF CHLORIDE OF AMMONIUM.

Take of Chloride of Ammonium, 1 oz.; Distilled Water. 10 fl. oz.: dissolve and filter.

SOLUTION OF CHLORIDE OF BARIUM.

Take of Chloride of Barium, in crystals, 1 oz.; Distilled Water, 10 fl. oz.: dissolve and filter

SOLUTION OF FERRICYANIDE OF POTASSIUM.

Ferricyanide of Potassium, in crystals, ¼ oz.; Distilled Water, 5 fl. oz.: dissolve and filter.

SOLUTION OF FERROCYANIDE OF POTASSIUM.

Ferrocyanide of Potassium, in crystals, ¼ oz.; Distilled Water, 5 fl. oz: dissolve and filter.

SOLUTION OF IODIDE OF POTASSIUM.

Take of Iodide of Potassium, 1 oz.; Distilled Water, 10 fl. oz.: dissolve and filter.

SOLUTION OF ISINGLASS.

Take of Isinglass, in shreds, 50 grs.; Warm Distilled Water, 5 fl. oz.: mix and digest for half an hour on a water bath with repeated shaking, and filter through clean tow moistened with distilled water.

SOLUTION OF LITMUS.

Litmus, in powder, 1 oz.; Rectified Spirit, 10 oz.; Distilled Water, 10 oz.; boil the Litmus with 4 fl. oz. of the Spirit for one hour, and pour away the clear fluid; repeat this operation with 3 fl. oz. of the Spirit; and a third time with the remainder of the Spirit. Digest the residual Litmus in Distilled Water and filter.

SOLUTION OF OXALATE OF AMMONIUM.

Take of Oxalate of Ammonium, ½ oz.; Warm Distilled Water, 20 fl. oz.: dissolve and filter.

SOLUTION OF PERCHLORIDE OF GOLD.

Take of Fine Gold, reduced by a rolling machine to a thin lamina, 60 grs.; Nitric Acid, 1½ fl. dr.; Hydrochloric Acid, 7 fl. drs.; Distilled Water, a sufficiency: place the Gold in a flask with the Nitric Acid and 6 fl. drs. of the Hydrochloric Acid, first mixed with 4 fl. drs. of the water, and digest until it is dissolved. Add to the solution the additional fluid dr. of Hydrochloric Acid, evaporate at a heat not exceeding 212° F. (100° C.) until acid vapours cease to be given off, and dissolve the Chloride of Gold thus obtained in 5 fl. oz. of Distilled Water. The solution should be kept in a stoppered bottle.

SOLUTION OF PERCHLORIDE OF PLATINUM.

Take of Thin Platinum Foil, ¼ oz.; Nitric Acid, a sufficiency; Hydrochloric Acid, a sufficiency; Distilled Water, 7 fl. oz.: mix 1 fl. oz. of the Nitric Acid with 4 fl. oz. of the Hydrochloric Acid, and 2 fl. oz. of the water; pour the mixture into a small flask containing the Platinum, and digest with a little heat, adding more of the acids mixed in the same proportion, should this be necessary, until the metal is dissolved. Transfer the solution to a porcelain dish, add to it 1 fl. drm. of Hydrochloric Acid, and evaporate on a water bath until acid vapours cease to be given off. Let the residue be dissolved in the remaining 5 oz. of Distilled Water. Filter, and preserve it in a stoppered bottle.

SOLUTION OF PHOSPHATE OF SODIUM.

Take of Phosphate of Sodium, in crystals, 1 oz.; Distilled Water, 10 fl. oz.; dissolve and filter.

SOLUTION OF POTASSIO-MERCURIC IODIDE. *Syn.* NESSLER'S REAGENT.

Take of Iodide of Potassium, 135 grs.; Perchloride of Mercury, a sufficiency; Caustic Soda, 2 oz; Distilled Water, 20 oz.: dissolve the Iodide of Potassium and 100 grs. of the Perchloride of Mercury in 15 fl. oz. of boiling Distilled Water. To this fluid add more aqueous solution of the Perchloride of Mercury until the precipitate produced no longer continues to disappear on well stirring, and a slight permanent precipitate remains. Then add the Caustic Soda. When the latter has dissolved, add a little more of the aqueous solution of Perchloride of Mercury, shake and allow to settle, and dilute the whole with Distilled Water to the volume of 20 oz.

The solution should be kept in a stoppered bottle.

As the stopper is very likely to become fixed, it should be wiped over with a little Soft Paraffin.

SOLUTION OF STANNOUS CHLORIDE.

Take of Granulated Tin, 1 oz.; Hydrochloric Acid, 3 fl. oz.; Distilled Water, a sufficiency: dilute the Acid in a flask with 1 fl. oz. of the water, and, having added the Tin, apply heat gently until gas ceases to be evolved. Add as much of the water as will make up the bulk to 5 fl. oz., and transfer the solution, together with the undissolved Tin, to a bottle with an accurately ground stopper.

SOLUTION OF SULPHATE OF CALCIUM.

Take of Sulphate of Calcium, ¼ oz.; Distilled Water, 20 oz.: rub the Sulphate of Calcium in a porcelain mortar, for a few minutes, with 2 oz. of the Water, introduce the mixture thus obtained into a pint bottle containing the rest of the Water, shake well several times, and allow the undissolved Sulphate to subside. Filter.

SOLUTION OF SULPHATE OF INDIGO.

Take of Indigo, dry, and in fine powder, 5 grs.; Sulphuric Acid, 10 fl. oz.: mix the Indigo with 1 fl. drm. of the Sulphuric Acid in a small test-tube, and heat on a water bath for an hour. Pour the blue liquid into the remainder of the Acid, agitate the mixture, and when the undissolved Indigo has subsided, decant the clear liquid into a stoppered bottle.

SOLUTION OF SULPHATE OF IRON.

Take of Granulated Sulphate of Iron, 10 grs.; Boiling Distilled Water, 1 fl. oz.: dissolve and filter. The solution should be recently prepared.

SOLUTION OF SULPHYDRATE OF AMMONIUM.

Take of Solution of Ammonia, 5 fl. oz.: put 3 fl. oz. of the Ammonia into a bottle, and conduct into this a stream of Sulphuretted Hydrogen so long as the gas continues to be absorbed, then add the remainder of the Ammonia, and transfer the solution to a green-glass bottle furnished with a well-ground stopper.

SOLUTION OF TARTARIC ACID.

Take of Tartaric Acid, in crystals, 1 oz.; Distilled Water, 8 fl. oz.; Rectified Spirit, 2 fl. oz.: dissolve the Tartaric Acid in the Water, add the Rectified Spirit, and preserve the solution in a stoppered bottle.

SOLUTION OF YELLOW CHROMATE OF POTASSIUM.

Take of Red Chromate of Potassium, 295 grs.; Bicarbonate of Potassium, 200 grs.; Distilled Water, 10 fl. oz.: dissolve the Red Chromate in the Water, and exactly neutralize the solution with the Bicarbonate, evolution of all Carbonic Acid being ensured by ebullition. Filter.

TINCTURE OF PHENOL-PHTHALEIN.

Take of Phenol-Phthalein, 1 gr.; Proof Spirit, 500 grs.: dissolve. The solution should be colourless.

III. TEST SOLUTIONS FOR VOLUMETRIC ESTIMATIONS.

The processes for volumetric estimations may be performed either with British or with metric weights and measures, and the solutions are so arranged that they will be of the same strength, and the same indications will be obtained in using them, whichever system is employed, without the *necessity* of altering any of the figures by which the quantities of the substances tested, or of the test solutions required in the process, are expressed.

According to the British system, the quantities of the substances to be tested are expressed in grains by weight, whilst the quantities of the test solutions employed in testing are expressed in grain-measures,—the grain-measure being the volume of a grain of Distilled Water.

According to the metric system, the quantities of the substances to be tested are expressed in grammes by weight, whilst the quantities of the test solutions employed in testing are expressed in cubic centimetres,—the cubic centimetre (C.C.) being the volume of a gramme of Distilled Water.

As the cubic centimetre bears the same relation to the gramme that the grain-measure bears to the grain, the one system may be substituted for the other with no difference in the results, excepting that, by the metric system, all the quantities will be expressed in relation to a weight (the gramme) which is rather more than fifteen (15·432) times greater than the British grain.

In practice it will be found convenient, in substituting metric for British weights and measures, to reduce the values of all the numbers to one-tenth, by moving the decimal points, and this has been done in the tables appended to the descriptions of the volumetric solutions. The quantities indicated in the Pharmacopœia, which in grains and grain-measures can be conveniently used, would be found inconveniently large if the same numbers of grammes and cubic centimetres were employed.

The following apparatus is required in the preparation and use of these solutions.

For British weights and measures:—

1. A flask which, when filled to a mark on the neck, contains exactly 10,000 grains of Distilled Water at 60° F. (15·5° C.) The capacity of the flask is therefore 10,000 grain-measures.

2. A graduated cylindrical jar which, when filled to 0, holds 10,000 grains of Distilled Water, and is divided into 100 equal parts.

3. A burette. A graduated glass tube which, when filled to 0, holds 1000 grains of Distilled Water, and is divided into 100 equal parts. Each part therefore corresponds to 10 grain-measures.

For metric weights and measures:—

1. A glass flask which, when filled to a mark on the neck, contains one litre or 1000 cubic centimetres.

2. A graduated cylindrical jar which, when filled to 0, contains one litre (1000 cubic centimetres), and is divided into 100 equal parts.

3. A burette. A graduated tube which, when filled to 0, holds 100 cubic centimetres, and is divided into 100 equal parts.

(One cubic centimetre is the volume of one gramme of Distilled Water at 4° C=39·2° Fahr.* 1000 cubic centimetres equal one litre.)

Volumetric solutions, before being used, should be shaken in order that they may be throughout of uniform strength. They should also be preserved in stoppered bottles. All measurements should be made at 60° Fahr. (15·5° C.).

VOLUMETRIC SOLUTION OF BICHROMATE OF POTASSIUM.

(Bichromate of Potassium, $K_2Cr_2O_7$=295.)

Take of Bichromate of Potassium, 147·5 grs.; Distilled Water, a sufficiency: put the Bichromate of Potassium into the 10,000-grain flask, and, having half filled the flask with water, allow the salt to dissolve; then dilute the solution with more water, until it has the exact bulk of 10,000 grain-measures. 1000 grain-measures of this solution contain $\frac{1}{20}$th of an equivalent in grains (=14·75 grains) of Bichromate of Potassium, and, when added to a solution of a Ferrous Salt, acidulated with Hydrochloric Acid, are capable of converting $\frac{1}{20}$th of six equivalents of Iron (=16·8 grains) from the Ferrous to the Ferric state.

Grammes and cubic centimetres may be employed instead of grains and grain-measures, but for convenience $\frac{1}{10}$th of the numbers should be taken. Thus 14·75 grammes of Bichromate of Potassium should be made to form 1000 cubic centimetres of solution. 100 cubic centimetres of this solution contain $\frac{1}{200}$th of an equivalent in grammes of the Bichromate of Potassium (=1·475 grammes), and are capable of converting $\frac{1}{200}$th of six equivalents of Iron (1·68 grammes) from the Ferrous to the Ferric state.

This solution is used for determining the proportion of Ferrous Salt in the following preparations. It is known that the whole of the Ferrous Salt has been converted into a Ferric Salt when a minute drop of the liquid, placed in contact with a drop of a very dilute solution of Ferricyanide of Potassium on a white plate, ceases to strike with it a blue colour.

	British Weights and Measures.				Metrical Weights and Measures.		
	Grains weight of Substance.	=	Grain-measures of Vol. Sol.	or	Grammes weight of Substance.	=	C. C. of Vol. Sol.
Ferri Arsenias . . .	100	=	225	or	10·0	=	22·5
,, Carb. Sacch. .	30	=	287·5	or	3·0	=	28·75
,, Phosphas . . .	30	=	279	or	3·0	=	27·9
,, Sulphas . . .	42·1	=	500	or	4·21	=	50·0
,, ,, Exsiccata	10·0	=	191	or	1·0	=	19·1
,, ,, Granulata	41·7	=	500	or	4·17	=	50·0

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* It is customary to make the measurements with metric apparatus at 60° F. (15·5° C.)

VOLUMETRIC SOLUTION OF HYPOSULPHITE OF SODIUM.

(Hyposulphite of Sodium Crystallized, $Na_2S_2O_3, 5H_2O = 248$.)

Take of Hyposulphite of Sodium, in crystals, 280 grs.; Distilled Water, a sufficiency: dissolve the Hyposulphite of Sodium in 10,000 grain-measures of water. Fill a burette with this solution, and drop it cautiously into 1000 grain-measures of the Volumetric Solution of Iodine, until the brown colour is just discharged. Note the number of grain-measures (n) required to produce this effect; then put 8000 grain-measures of the same solution into a graduated jar, and augment this quantity by the addition of Distilled Water, until it amounts to $\frac{8000 \times 1000}{n}$ grain-measures. If, for example, $n = 950$, the 8000 grain-measures of solution should be diluted to the bulk of $\frac{8000 \times 1000}{950} = 8421$ grain-measures. 1000 grain-measures of this solution contain $\frac{1}{10}$th of an equivalent in grains = 24·8 grains of the Hyposulphite, and therefore correspond to $\frac{1}{10}$th of an equivalent in grains = 12·7 grains of Iodine.

Grammes and cubic centimetres may be employed instead of grains and grain-measures, but for convenience $\frac{1}{10}$th of the numbers should be taken. 100 cubic centimetres of this solution contain $\frac{1}{100}$th of an equivalent of Hyposulphite in grammes (= 2·48 grammes), and therefore correspond to $\frac{1}{100}$th of an equivalent in grammes (1·27 grammes) of Iodine.

The solution is used for testing the following substances. In each case, excepting that of Iodine, a solution of Iodide of Potassium and Hydrochloric Acid is added to the substance, and the amount of Iodine so liberated is indicated by this solution.

	British Weights and Measures.				Metrical Weights and Measures.		
	Grains weight of Substance.	=	Grain-measures of Vol. Sol.	or	Grammes weight of Substance.	=	C. C. of Vol. Sol.
Calx Chlorinata . .	5·0	=	467	or	0·50	=	46·7
Iodum	12·7	=	1000	or	1·27	=	100·0
Liq. Calc. Chlorinatæ	80·0	=	450	or	8·00	=	45·0
,, Chlori . . .	439·0	=	750	or	43·90	=	75·0
,, Sodæ Chlorinatæ	70·0	=	500	or	7·00	=	50·0

VOLUMETRIC SOLUTION OF IODINE.

(Iodine, $I = 127$.)

Take of Iodine, 127 grains; Iodide of Potassium, 180 grains; Distilled Water, a sufficiency: put the Iodide of Potassium and the Iodine into the 10,000-grain flask, fill the flask to about two-thirds its bulk with Distilled Water, gently agitate until solution is complete, and then dilute the solution with more water until it has the exact volume of 10,000 grain-measures. 1000 grain-measures of this solution contain $\frac{1}{10}$th of an equivalent in grains (12·7 grains) of Iodine, and therefore correspond to 1·7 grains of Sulphuretted Hydrogen, 3·2 grains of Sulphurous, and 4·95 grains of Arsenious Anhydride.

Grammes and cubic centimetres may be employed instead of grains and grain-measures, but for convenience $\frac{1}{10}$th of the numbers should be taken. 100 cubic centimetres contain 1·27 grammes of Iodine, and correspond to 0·17 gramme of Sulphuretted Hydrogen, 0·32 gramme of Sulphurous Anhydride, and 0·495 gramme of Arsenious Anhydride.

This solution is used for testing the following substances. It is dropped from the burette into the liquid to be tested until free Iodine begins to appear in the solution.

	British Weights and Measures.				Metrical Weights and Measures.		
	Grains weight of Substance.	=	Grain-measures of Vol. Sol.	or	Grammes weight of Substance.	=	C. C. of Vol. Sol.
Acid. Arseniosum . .	4·0	=	808	or	0·40	=	80·8
,, Sulphurosum . .	64·0	=	1000	or	6·40	=	100·0
Liquor Arsenicalis . .	442·0	=	875	or	44·20	=	87·5
,, Arsenici Hydrochloricus	442·0	=	875	or	44·20	=	87·5
Sodii Hyposulphis . .	24·8	=	1000	or	2·48	=	100·0

VOLUMETRIC SOLUTION OF NITRATE OF SILVER.

(Nitrate of Silver, $AgNO_3 = 170$.)

Take of Nitrate of Silver, 170 grs.; Distilled Water, a sufficiency: put the Nitrate of Silver into the 10,000-grain flask, and, having half filled the flask with water, allow the salt to dissolve; then dilute the solution with more water until it has the exact volume of 10,000 grain-measures. The solution should be kept in an opaque stoppered bottle. 1000 grain-measures of this solution contain $\frac{1}{10}$th of an equivalent in grains (17 grains) of Nitrate of Silver.

Grammes and cubic centimetres may be employed instead of grains and grain-measures, but for convenience $\frac{1}{10}$th of the numbers should be taken 100 cubic centimetres contain $\frac{1}{100}$th of an equivalent in grammes (1·7 grammes) of Nitrate of Silver.

It is used in testing the following substances:—

	British Weights and Measures.				Metrical Weights and Measures.		
	Grains weight of Substance.	=	Grain-measures of Vol. Sol.	or	Grammes weight of Substance.	=	C. C. of Vol. Sol.
Acid. Hydrocyan. Dil.	270	=	1000	or	27·0	=	100·0
Ammonii Bromidum .	5	=	508·5 to 514·5	or	0·5	=	50·85 to 51·45
Potassii Bromidum .	10	=	838 to 850	or	1·0	=	83·8 to 85·0
,, Cyanidum . .	10	=	730	or	1·0	=	73·0
,, Iodidum . .	10	=	602	or	1·0	=	60·2
Sodii Bromidum . .	10	=	960	or	1·0	=	96·0
,, Iodidum . . .	10	=	660	or	1·0	=	66·0

VOLUMETRIC SOLUTION OF OXALIC ACID.

(Crystallized Oxalic Acid, $H_2C_2O_4 . 2H_2O = 126$.)

Take of Oxalic Acid, in crystals, 660 grs.; Distilled Water, a sufficiency: put the Oxalic Acid into the 10,000-grain flask, fill the flask to about two-thirds of its bulk with water, allow the acid to dissolve, and then dilute the solution with more water until it has the exact volume of 10,000 grain-measures. Fill a burette with the fluid, and add it gradually to a solution of 10·6 grains of pure Carbonate of Sodium (which may be obtained by heating the ordinary pure Bicarbonate of Sodium to redness in a platinum crucible for a quarter of an hour), containing a few drops of Solution of Litmus, until the red colour produced ceases to change to blue on boiling. Note the number of grain-measures used (*n*), then put 9000 grain-measures of the Solution of Oxalic Acid into a graduated jar, and augment this quantity by the addition of Distilled Water until it amounts to $\frac{9000 \times 200}{n}$ grain-measures. 1000 grain-measures of this solution contain half an equivalent in grains (=63 grains) of Oxalic Acid, and are therefore capable of neutralizing one equivalent in grains of an alkali, such as Potash, KHO, or half an equivalent in grains of such salts as Anhydrous Carbonate of Sodium Na_2CO_3.

Grammes and cubic centimetres may be employed instead of grains and grain-measures, but for convenience $\frac{1}{10}$th of the numbers should be taken. 100 cubic centimetres contain $\frac{1}{20}$th of an equivalent in grammes (=6·3 grammes) of Oxalic Acid, and will neutralize $\frac{1}{10}$th of an equivalent in grammes of an alkali.

The following substances are tested with this solution:—

	British Weights and Measures.				Metrical Weights and Measures.		
	Grains weight of Substance.	=	Grain-measures of Vol. Sol.	or	Grammes weight of Substance.	=	C. C. of Vol. Sol.
Ammonii Carb	52·3	=	1000	or	5·23	=	100·0
Borax	191·0	=	1000	or	19·10	=	100·0
Liq. Ammoniæ	85·0	=	500	or	8·50	=	50·0
,, ,, Fort.	52·3	=	1000	or	5·23	=	100·0
,, Calcis	4375	=	180	or	437·5	=	18·0
,, ,, Sacchar.	460·2	=	254	or	46·02	=	25·4
,, Plumbi Subacet.	284·5	=	500	or	28·45	=	50·0
,, Potassæ	462·9	=	482	or	46·29	=	48·2
,, ,, Efferves.	4375·0	=	150	or	437·50	=	15·0
,, Sodæ	458·0	=	470	or	45·80	=	47·0
,, ,, Efferves.	4375·0	=	178	or	437·50	=	17·8
Plumbi Acetas	38·0	=	200	or	3·80	=	20·0
Potassa Caustica	56·0	=	900	or	5·60	=	90·0
Potassii Bicarbonas	50·0	=	500	or	5·00	=	50·0
,, Carbonas	83·0	=	980	or	8·30	=	98·0
,, Citras	102·0	=	1000	or	10·20	=	100·0
,, Tartras	122·0	=	990	or	12·2	=	99·0
,, ,, Acida	204·0	=	1000	or	20·40	=	100·0
Soda Caustica	40·0	=	900	or	4·00	=	90·0
,, Tartarata	141·0	=	990	or	14·10	=	99·0
Sodii Bicarbonas.	84·0	=	1000	or	8·40	=	100·0
,, Carbonas	143·0	=	960	or	14·30	=	96·0
Sodium.	23·0	=	975	or	2·30	=	97·5

VOLUMETRIC SOLUTION OF SODA.

(Hydrate of Sodium, NaHO=40.)

Take of Solution of Soda, a sufficiency; Distilled Water, a sufficiency: fill a burette with the Solution of Soda, and cautiously drop this into 1000 grain-measures of the volumetric Solution of Oxalic Acid, until the acid is exactly neutralized as indicated by Litmus. Note the number of grain-measures (n) of the Solution of Soda used, and, having then introduced 9000 grain-measures of it into a graduated jar, augment this quantity by the addition of water, until it becomes $\frac{9000 \times 1000}{n}$ grain-measures.

If, for example, $n = 930$, the 9000 grain-measures should be augmented to $\frac{9000 \times 1000}{930} = 9677$ grain-measures. 1000 grain-measures of this solution contain one equivalent in grains (40 grains) of Hydrate of Sodium, and will therefore neutralize one equivalent in grains of any monobasic acid.

Grammes and cubic centimetres may be employed instead of grains and grain-measures, but for convenience $\frac{1}{10}$th of the numbers should be taken. 100 cubic centimetres contain $\frac{1}{10}$th equivalent in grammes (4 grammes) of Hydrate of Sodium, and will neutralize $\frac{1}{10}$th of an equivalent in grammes of a monobasic acid.

This solution is used for testing the following substances:—

	British Weights and Measures.				Metrical Weights and Measures.		
	Grains weight of Substance.	=	Grain-measures of Vol. Sol.	or	Grammes weight of Substance.	=	C. C. of Vol. Sol.
Acetum	445·4	=	402	or	44·54	=	40·2
Acid. Aceticum . . .	182·0	=	1000	or	18·20	=	100·0
,, ,, Dil. .	440·0	=	313	or	44·00	=	31·3
,, ,, Glac. .	60·0	=	990	or	6·00	=	99·0
,, Citricum . . .	70·0	=	1000	or	7·00	=	100·0
,, Hydrobrom. Dil. .	810·0	=	1000	or	81·00	=	100·0
,, Hydrochloricum .	114·8	=	1000	or	11·48	=	100·0
,, ,, Dil.	345·0	=	1000	or	34·50	=	100·0
,, Lacticum . . .	120·0	=	1000	or	12·00	=	100·0
,, ,, Dil. . .	800·0	=	1000	or	80·00	=	100·0
,, Nitricum . . .	90·0	=	1000	or	9·00	=	100·0
,, ,, Dil. . .	361·3	=	1000	or	36·13	=	100·0
,, Nit. Hydrochl. Dil.	352·0	=	883	or	35·20	=	88·3
,, Sulphuricum . .	50·0	=	1000	or	5·00	=	100·0
,, ,, Arom.	195·0	=	500	or	19·50	=	50·0
,, ,, Dil. .	359·0	=	1000	or	35·90	=	100·0
,, Tartaricum . . .	25·0	=	330	or	2·50	=	33·0

INDICATORS OF THE TERMINATION OF REACTIONS IN VOLUMETRIC OPERATIONS.

MUCILAGE OF STARCH.

It gives an intense blue colour with Iodine. It may be used with the following substances:—

Acidum Arseniosum
,, Sulphurosum
Calx Chlorinata
Iodum
Liquor Arsenicalis
Liquor Arsenici Hydrochloricus
,, Calcis Clorinatæ
,, Chlori
,, Sodæ Chlorinatæ
Sodii Hyposulphis

SOLUTION OF FERRICYANIDE OF POTASSIUM.

It gives an intensely blue precipitate with Ferrous Salts, but none with Ferric Salts. It is used with the following substances:—

Ferri Arsenias
,, Carbonas Saccharata
,, Phosphas
Ferri Sulphas
,, ,, Exsiccata
,, ,, Granulata

SOLUTION OF LITMUS.

It gives a red colour with acids and a blue colour with alkalies. It may be used with the following substances:—

Acidum Hydrochloricum
,, ,, Dilutum
,, Nitricum
,, ,, Dilutum
,, Nitro-Hydrochl. Dil.
,, Sulphuricum
,, ,, Arom.
,, ,, Dil.
Ammonii Carbonas
Borax
Liquor Ammoniæ
,, ,, Fortior
,, Calcis
,, ,, Saccharatus

Liquor Potassæ
,, ,, Effervescens
,, Sodæ
,, ,, Effervescens
Potassa Caustica
Potassii Bicarbonas
,, Carbonas
,, Citras
,, Tartras
,, ,, Acida
Soda Caustica
,, Tartarata
Sodii Bicarbonas
,, Carbonas

SOLUTION OF YELLOW CHROMATE OF POTASSIUM.

It gives a red colour with Nitrate of Silver, but not until any soluble Bromide or Iodide present is entirely decomposed. It may be used with the following substances:—

Ammonii Bromidum
Potassii ,,

Potassii Iodidum
Sodii Bromidum

Sodii Iodidum.

TINCTURE OF PHENOL-PHTHALEIN.

It gives an intense red colour with Potash or Soda. It may be used with the following substances:—

Acetum
Acidum Aceticum
,, ,, Dilutum

Acidum Aceticum Glaciale
,, Citricum
,, Tartaricum

Not Official.

GRANULATED PREPARATIONS.

MADE IN THE MANNER DIRECTED IN THE BRITISH PHARMACOPŒIA FOR PREPARING SODII CITRO-TARTRAS EFFERVESCENS.

The following is the quantity usually contained in 60 grains = an ordinary teaspoonful, which is considered a commencing dose :—

Bromide of Ammonium, 2 grs.
„ „ Potassium, 2 grs.
„ „ Sodium, 2 grs.
Carbonate of Bismuth, 2 grs.
„ „ Iron, 2 grs.
„ „ Lithium, 2 grs.
Citrate of Iron, 3 grs.
„ „ „ and Quinine, 3 grs.
„ „ Cinchonine, 2 grs.
Citrate of Quinine, 1 gr.
Hypophosphite of Calcium, 2 grs.
Iodide of Iron, 1 gr.
„ „ Potassium, 2 grs.
„ „ Sodium, 2 grs.
Nitrate of Cerium, 1 gr.
„ „ Potassium, 5 grs.
Phosphate of Iron, 1 gr.

The several imitations in a granular effervescent form of the following Mineral Waters, the dose being a large teaspoonful :—

Carlsbad.
Cheltenham.
Fachingen.
Kissingen.
Marienbad.
Pullna.
Seltzer.
Vichy.

Also for Gingerade and Lemonade.

SUPPOSITORIA.

SUPPOSITORIES.

Official.

ACIDI CARBOLICI C. SAPONE, Carbolic Acid, 1 gr. in each.

ACIDI TANNICI.
Tannic Acid, 3 grs. in each.

ACIDI TANNICI C. SAPONE, Tannic Acid, 3 grs. in each.

HYDRARGYRI.
Mercurial Ointment, 5 grs. in each.

IODOFORMI.
Iodoform, 3 grs. in each.

MORPHINÆ.
Hydrochlorate of Morphine, ½ gr. in each.

MORPHINÆ C. SAPONE, Hydrochlorate of Morphine, ½ gr. in each.

PLUMBI COMPOSITA.
Acetate of Lead, 3 grs.; Opium, 1 gr. in each.

Not Official.

Anthelmintic.

Santonin, 5 grs.

Antiseptic.

Carbolic Acid, 1 gr.

Astringent.

Acetate of Lead, 3 grs.
Sulphate of Copper, 2 grs.
Iron Alum, 3 grs.
Galls, in powder, 5 grs.

Astringent and Sedative.

Galls, in powder, 5 grs. } mixed.
Opium, in powder, 1 gr. }

Caustic.

Dried Sulphate of Zinc, 10 grs.

Cicatrizing and Emollient.

Oxide of Bismuth, 10 grs.
Borax, in powder, 5 grs.
Oxide of Zinc, 10 grs.

Purgative.

Purified Aloes, 5 grs.
Aloin, 1 gr. } mixed.
Soap, 5 grs. }
Elaterium, ½ gr.
Gamboge, 3 grs.
Podophyllin, 1 gr.

Sedative.

Belladonna Extract, 2 grs.
Hyoscyamus Extract, 5 grs.
Opium, in powder, 2 grs.
Sulphate of Morphine, ½ gr.
Extract of Opium, 1 gr.

PESSARIES, OR VAGINAL SUPPOSITORIES.

Not Official.

(NO PESSARIES ARE ORDERED IN THE BRITISH PHARMACOPŒIA.)

Antacid.

Bicarbonate of Sodium, 15 grs.

Alterative and Resolvent.

Iodide of Lead, 5 grs.
Iodide of Lead, 5 grs. } mixed.
Atropine, $\frac{1}{20}$ gr. }
Iodide of Potassium, 10 grs.
Bromide of Potassium, 10 grs.
Mercurial Ointment, 30 grs.

Astringent.

Alum, in powder, 15 grs.
Alum, 15 grs. } mixed.
Catechu, 15 grs. }
Iron Alum, 10 grs.
Acetate of Lead, 7 grs.
Acetate of Lead, 5 grs. } mixed.
Opium Powder, 2 grs. }
Matico, in powder, 10 grs.
Sulphate of Iron, dried, 10 grs.
Gallic Acid, 10 grs.
Tannic Acid, 10 grs.

Hæmostatic.

Perchloride of Iron crystals, 5 grs.
Persulphate of Iron, solid, 15 grs.

Caustic.

Red Oxide of Mercury, 2 grs.
Sulphate of Zinc, dried, 10 grs.

Cicatrizing and Emollient.

Borax, in powder, 15 grs.
Oxide of Bismuth, 15 grs.
Oxide of Zinc, 15 grs.

Deodorant.

Carbolate of Calcium, 10 grs.
Carbolic Acid, 2 grs.

Sedative.

Atropine, $\frac{1}{20}$ gr.
Belladonna Extract, 2 grs.
Hemlock Extract, 5 grs.
Morphine Hydrochlorate, $\frac{1}{2}$ gr.
Opium, in powder, 2 grs.

URETHRAL SUPPOSITORIES, OR MEDICATED BOUGIES.

(Cylinders about $2\frac{1}{2}$ inches long; diameter of a No. 9 bougie.)

Acetate of Lead, $\frac{1}{2}$, $\frac{2}{3}$, $\frac{3}{4}$ gr.
Nitrate of Silver, $\frac{1}{4}$ gr.
Tannic Acid, 1 gr.
Ext. Belladonna, 2 grs.
Ext. Opium, 1 gr.

White Bismuth, 10 grs.
White Bismuth, 10 grs. } mix.
Acetate of Lead, $\frac{1}{2}$ gr. }
Perchloride of Iron, $\frac{1}{2}$, $\frac{3}{4}$, and 1 gr.

Theobroma Oil is the usual substance employed for forming these agents, but Stearin and mixtures of Fats and Wax may be employed. The temperature at which these solidify will be found at page 344.

MEDICATED PLEDGETS OF COTTON.

The following (weighing 30 grs. each), and containing severally the quantities of ingredients as follows, have been introduced for the local treatment of Uterine affections:—

Bromide of Potassium, 4 grs.
Iodide of Potassium, 4 grs.
Iodine, 2 grs.
Matico Tincture, ʒ ss.

Hydrochlorate of Morphine, $\frac{1}{4}$ gr.
Persulphate of Iron, 3 grs.
Tannic Acid, $2\frac{1}{2}$ grs.

AMERICAN ECLECTIC REMEDIES.

ALTERATIVE AND APERIENT.

Baptisin (*Wild Indigo*). Purgative and emetic, 1 to 5 grains; given in typhus and gangrene.

Is an hepatic, and also an intestinal stimulant of considerable power.—Dr. Rutherford.

Corydalin (*Turkey Pea Root*). Antisyphilitic, alterative, tonic, ½ to 5 grs., and given with hydrastin.

Euonymin (*Wahoo Bark*). Mild aperient, 1 to 2 grs.; expectorant, diuretic, ¼ to 1 gr.

Is a powerful hepatic, but feeble intestinal stimulant.—Dr. Rutherford.

Iridin (*Blue Flag*). Renal alterative, ⅛ to ¼ gr.; purgative, diuretic, emetic, 1 to 5 grs.

Is a powerful hepatic stimulant; it also stimulates the intestines.—Dr. Rutherford.

Juglandin (*Butter Nut*).

Is a moderately powerful hepatic, and a mild intestinal stimulant.—Dr. Rutherford.

Leptandrin (*Veronica Virginica*). Hepatic alterative, ¼ to ½ gr.; purgative, 2 to 4 grs.

Is an hepatic stimulant of moderate power; it is a feeble intestinal stimulant. —Dr. Rutherford.

Phytolaccin (*Poke Root*). Scorbutic alterative, ⅛ to ¼ gr.; purgative, slow emetic, ¼ to 1 gr., employed in chronic rheumatism.

Is a powerful hepatic stimulant; it also slightly stimulates the intestinal glands.—Dr. Rutherford.

Podophyllin. See page 271.

Rumicin (*Yellow Dock*). Astringent, antiscorbutic, alterative, 2 to 5 grs.

Sanguinarin (*Blood Root*). Hepatic alterative ¼ to 1 gr.; somewhat narcotic.

Is a powerful hepatic, but a feeble intestinal stimulant.—Dr. Rutherford.

TONIC, ETC.

Asclepedin (*Pleurisy Root*). Expectorant and diaphoretic, 1 to 4 grs.

Caulophyllin (*Blue Cohosh*). Uterine and diuretic tonic, ¼ to 1 gr.; parturient, 2 to 4 grs.

Cimicifugin (*Actæa racemosa*). A nerve tonic and sedative, 2 to 4 grs.

Cornin (*Dogwood*). Stimulant astringent tonic, 1 to 10 grs.; increasing the pulse in force and frequency.

Cypripedin (*Ladies' Slipper*). Nervous stimulant, 1 to 3 grs.; in hypochondria.

Gelsemin (*Yellow Jessamin*). Nervous sedative, ½ to 2 grs.; antispasmodic anodyne.

Geranin (*Cranesbill*). Astringent tonic, 1 to 5 grs., and given with Hydrastin in dysentery and diarrhœa.

Hydrastin (*Golden Seal*). Dyspeptic tonic and febrifuge, 1 to 5 grs. Is said to be identical with Muriate of Beberine.

Is a moderately powerful stimulant of the liver, and a feeble stimulant of the intestines.—Dr. Rutherford.

Menispermin (*Yellow Parilla*). Dyspeptic tonic, 1 to 2 grs.; aperient, 5 grs.

Does not stimulate the liver; it slightly stimulates the intestinal glands.—Dr. Rutherford.

Scutellarin (*Skullcap*). Nervous non-exciting tonic, 2 to 6 grs.; given in neuralgia.

Senecionin (*Life Root*). Diuretic and emmenagogue, 3 to 5 grs.; given in strangury.

SPAS OF EUROPE.

IN BRITAIN.

The solid contents of a pint are indicated by "grains in 20 fluid ounces."

AIRTHREY (Bridge of Allan). Saline Aperient; 91 grs. in 20 oz. Chlorides of Sodium, Calcium, and Magnesium, and Sulphate of Calcium.

ALDFIELD (Yorkshire). A soft water; slightly Sulphureous.

ASKERNE (Yorkshire). A soft water: weak Saline Aperient and Sulphureous. Old Manor, 30 grs. in 20 oz., chiefly Magnesia and Lime.

ASHBY-DE-LA-ZOUCH. Salt Brine, used only for baths, when mixed with water.

BATH (Somersetshire). Altitude 16'. The only true thermal waters in England. Saline, 17 grs. in 20 oz., chiefly Sulphate of Lime, with Carbonic Acid and Nitrogen. Swimming Bath, 88°; Cross Bath, 104°; Kingston Spring, 108° (which partly supplies King's Bath); Queen's, 112°; King's, 117°; Hot Bath, 120°. Baths for chronic rheumatism, gout, and paralysis.

BOSCOMBE (Bournemouth, Hampshire). Chalybeate; contains 2¾ grs., which includes ½ gr. Iron in 20 oz., with Carbonic Acid.

BRIGHTON (Sussex). A cold Chalybeate; contains 11½ grs., which includes 1 gr. Iron in 20 oz., with Carbonic Acid.

BRISTOL. Hot Wells, 80° F. Contains 7 grs. in 20 oz., chiefly Sulphates of Lime and Soda, with 4½ cubic inches of Carbonic Acid.

BUTTERBY (Durham). Sulphureous. Not important.

BUXTON (Derbyshire). Altitude 900'. Bracing air; pure water, temp. 82° F.; contains only 2¼ grs. in 20 oz., with ½ cubic inch of Carbonic Acid, and 60 cubic inches of Nitrogen. Good in chronic gout and rheumatism.

CHELTENHAM (Gloucestershire). Of the *Montpelier Spas*, No. 1 is Saline Aperient; No. 2, Ioduretted and Sulphuretted Chalybeate; 4, pure Saline; 4*a*, strongly Ioduretted Saline; 5, Ioduretted Magnesian Saline. Of the *Royal Old Wells*, one is Chalybeate, and the rest Saline Aperient; the whole with more or less Carbonic Acid. Season, from July to October.

CLIFTON (Gloucestershire). Air mild, elastic. Hot Well, 74° F. Feebly Saline; contains 5½ grs. in 20 oz. A resort for pulmonary patients.

CROFT (Yorkshire). Water 51° F. Saline, strongly Sulphureous; contains 19½ grs. in 20 oz.; chiefly Sulphate of Magnesia. Useful in skin diseases.

DINSDALE (Northamptonshire). Water 52° F. Strongly Sulphureous; contains 27 grs. in 20 oz., chiefly Sulphate of Lime. Acting on the skin and kidneys, and useful in dyspepsia.

DORTON (Buckinghamshire). Chalybeate, with Carbonic Acid; contains 12 grs. of Sulphate of Iron in 20 oz.; needs much dilution for internal use.

DROITWICH (Worcestershire). Brine pits; when diluted, used for salt-baths only.

DUNBLANE (Perthshire). Saline; contains 46 grs. in 20 oz., chiefly Chlorides of Calcium and Sodium.

FILEY (Yorkshire). Saline aperient; contains 49 grs. in 20 oz., chiefly Chlorides of Sodium, Magnesium, and Calcium, and Sulphate of Magnesia.

FLITWICK (Ampthill, Beds). Chalybeate Aperient; contains 31 grs. in 20 oz., Carbonate of Iron, Sulphates of Magnesia and Soda, Chloride of Magnesium, and Carbonate of Lime.

GAINSBOROUGH (Lincolnshire). Weak Saline, Chalybeate; not important.

GILSLAND (Cumberland). Air bracing and very healthy. Two springs; one strongly Chalybeate, and one strongly Sulphureous, useful in skin diseases and dyspepsia.

GLOUCESTER SPA. Contains 70 grains in 20 oz., chiefly Chloride of Sodium and Sulphate of Soda; not important.

HAIL-WESTON (St. Neots, Hunts). Saline Aperient; contains 30 grs. in 20 oz., more than half of which is Chloride of Sodium; also Sulphates of Magnesia and Soda, and Carbonate of Lime.

HARROGATE (Yorkshire). The old Sulphur spring contains 137 grs. in 20 oz., chiefly Chlorides, with 3·12 cubic inches of Carbonic Acid Gas, and 1·4 Sulphuretted and Carburetted Hydrogen. There are two principal Chalybeate springs. The new spring contains 62 grs. in 20 oz., chiefly Chlorides of Calcium, Magnesium, Potassium, and Sodium, with Protochloride of Iron, together with Carbonic Acid and Nitrogen.

HASTINGS (Sussex). Air mild, Chalybeate; contains 2¾ grs. in 20 oz., chiefly Sulphates of Iron, Magnesia, Lime, and Soda, with 3¼ cubic inches Carbonic Acid Gas.

HOCKLEY (near Southend, Essex). Saline, and very mild Aperient.

HORLEY GREEN (Yorkshire). Aluminous, and strongly Chalybeate; contains large quantities of Sulphate of Iron. Not much used.

HOVINGDON (Northumberland). Feebly Alkaline and Sulphureous; 6 grs. in 20 oz., chiefly Carbonate of Soda and Chloride of Sodium.

INVERLEITHEN (Peeblesshire). Air pure, and scenery good. Saline; 28 grs. in 20 oz., chiefly Chlorides of Calcium and Sodium.

KINGSWOOD (Gloucestershire). Cherry rock bitter water; 56 grs. in 20 oz., chiefly Sulphates of Magnesia and Soda, with 4 cubic inches of Carbonic Acid.

LEAMINGTON (Warwickshire). Old Well, 48° F., contains 104 grs. in 20 oz., chiefly Chlorides of Calcium and Sodium, and Sulphate of Soda with Carbonic Acid. The Saline Chalybeate contains 132 grs. in 20 oz., chiefly Chlorides of Calcium, Magnesium, and Sodium, and Sulphate of Soda, with 2 cubic inches of Carbonic Acid. There are also other springs, useful in stomach and liver complaints.

LONDON, Bagnigge Wells, 1 Aperient, 1 Chalybeate; Chad's Well, near Battle Bridge, and St. Pancras Wells, both Aperient; Hampstead, Sadler's Wells, and Kensington Gardens, Chalybeate: Beulah, Kilburn, Epsom, and Streatham, are all Aperient; chiefly Sulphate of Magnesia.

MALTON (Yorkshire). A strong Saline Chalybeate, similar to Scarborough.

MALVERN (Worcestershire). Air mild, highly salubrious. Holywell, St. Anne, cold and pure, highly useful in painful affections of the kidneys and bladder.

MATLOCK (Derbyshire). Climate mild and humid. Calcareous, slightly Chalybeate, with Carbonic Acid.

MELKSHAM (Wiltshire). Two springs, one Saline, and one Chalybeate. These waters are charged with Carbonic Acid artificially, and bottled.

MOFFAT (Dumfriesshire). Hartfell spring, Aluminous and strongly Chalybeate; 12 grs. in 20 oz. A resort for pulmonary patients. Sulphur Wells, contains 4½ grs. in 20 oz., chiefly Chloride of Sodium, 1 cubic inch of Sulphuretted Hydrogen.

PITKEATHLY (Perthshire). Saline; contains 38 grs. in 20 oz., chiefly Chloride of Calcium and Chloride of Sodium, and 1 cubic inch of Carbonic Acid.

PURTON (Wiltshire). Iodide of Sodium and Bromide of Magnesium, with Sulphates of Magnesia and Soda: 43½ grs. in 20 oz., and 6 cubic inches of Carbonic Acid Gas.

SANDROCK (I. of Wight). Aluminous Chalybeate, with Carbonic Acid; contains 41½ grs. of Sulphate of Iron, and 31½ grs. of Sulphate of Alumina in 20 oz. Used for baths, but much diluted when taken internally.

SCARBOROUGH (Yorkshire). Altitude 174′. Two Saline Chalybeates. North Well, 45¼ grs. in 20 oz. South Well, 66 grs. in 20 oz. Both Wells are similarly constituted, containing Sulphate of Lime and Sulphate of Magnesia, with a small amount of Nitrogen Gas.

SHAP (Westmoreland). Saline; contains 48 grs. to 20 oz., of which 26 are Chloride of Calcium; also traces of Sulphuretted Hydrogen. Tonic and diuretic; good in scrofula.

SHOTLEY (Northumberland). Saline, Chalybeate; contains 20 grs. in 20 oz. chiefly Chloride of Sodium, with 1 gr. Oxide of Iron, and 4½ grs. Chloride of Calcium. Not much frequented.

STRATHPEFFER (Ross-shire). Two springs; the Upper contains 18 grs. in 20 oz., chiefly Sulphates of Soda and Lime, with 3¼ c. in. of Sulphuretted Hydrogen; the Lower contains 13½ grs. in 20 oz. of the same Salts, but with only 1⅔ c. in. of Sulphuretted Hydrogen. The Upper contains the largest quantity of Sulphuretted Hydrogen of any spring in Britain. Much resorted to for gout, rheumatism, scrofula, and skin diseases.

TUNBRIDGE (Kent). Altitude 289′. Chalybeate; temp. 50° F.; contains only 1 gr. in 20 oz., including ⅛th of a grain of Iron, with Carbonic Acid.

TYNEMOUTH (Northumberland). Scenery picturesque. Chalybeates which may be drunk as an auxiliary to the sea-bathing, as at Scarborough.

VICTORIA (Stratford, Essex). Saline Aperient; contains 81 grs. in 20 oz., chiefly Sulphate of Soda, and ½ cubic inch of Sulphuretted Hydrogen. Useful in stomach and liver diseases.

WHITBY (Yorkshire). Bagdale, Chalybeate; nearly 3 grs. in 20 oz., and ⅛th gr. of Carbonate of Iron.

WINFRED at Holywell (Flintshire). Pure water, and flows at the rate of 21 tons a minute.

WOODHALL (Lincolnshire). 55° F. Iodine and Bromine, with Chlorides of Calcium, Magnesium, Potassium, more than ½ gr. Bromide of Sodium, and ¼ gr. Iodide of Sodium: 190 grs. in 20 oz.; strongly impregnated with Carbonic Acid. Useful in chronic rheumatism, scrofula, tertiary syphilis, etc.

FOREIGN.

The dose is from a wineglassful to a tumblerful, and at the spas the gas is often allowed to escape.

ACHSELMANNSTEIN (Bavaria), altitude 1407′. Saline, aperient, and slightly chalybeate. Climate mild and equable. Season, May to September.

Baths and Vapour Baths, for incipient tuberculosis, cutaneous diseases, and derangements of the uterine system.

Buchner's Analysis of 16 oz. Troy=7680 grs. of the Edelquelle brine spring:—

			1757·69
Chloride of Sodium . .	1723·10	Sulphate of Lime . . .	31·98
Chloride of Ammonium	·19	Carbonate of Lime . . .	·07
Chloride of Magnesium	13·84	Carbonate of Magnesia .	traces
Bromide of Magnesium	·23	Peroxide of Iron and Alumina	·06
Sulphate of Soda . . .	15·63	Silica	·08
Sulphate of Potash . .	4·70		
	1757·69		1789·88 grs.

Gas.—Carbonic Acid.

ADELHEIDSQUELLE (Heilbrunn, a healthy town in Bavaria), altitude 2000′. Saline, with Iodine and Bromine. Temp. of spring, 50° F. Season, May to September.

Powerfully alterative and tonic. Useful in scrofulous complaints, strumous affections of the skin, rheumatism, and gout, and for complaints peculiar to females.

Pettenkofer's Analysis of 16 oz. Troy=7680 grs.—Contains about 47 grs. solid matter, viz.:—

Chloride of Sodium . . .	38·06		45·48
Iodide of Sodium . . .	·21	Carbonate of Magnesia . .	·14
Bromide of Sodium . . .	·36	Alumina	·14
Carbonate of Soda . . .	6·21	Carbonate of Iron	·07
Chloride of Potassium . .	·02	Silica	·14
Sulphate of Soda . . .	·04	Phosphate of Lime . . .	traces
Carbonate of Lime . . .	·58	Organic matter	·16
	45·48		46·13 grs.

Gases.		Cub. Inch.
	Carbonic Acid	13·18
	Carburetted Hydrogen	8·02
	Nitrogen	6·54
	Oxygen	1·38
		29·12

Imported.

AIX-LA-CHAPELLE (Rhenish Prussia), altitude 450′. Situated in a valley. Climate mild. Mean temperature in June, July, and August, 63° F. Saline, sulphureous.

Used for drinking, bathing, and douching; in cutaneous diseases, stiffness of joints, paralysis, obstructions of the liver, and syphilis.

Liebig's Analysis of 16 oz. Troy = 7680 grs.:—

	Kaiser-quelle.	Cornelius-quelle.	Rosen-quelle.	Quirinus-quelle.	
Temperature, Fahr.	131°	121·3°.	116·6°.	113·6°.	
Chloride of Sodium . . .	20·271	18·934	19·552	19·937	grains.
Bromide of Sodium . . .	·028	·028	·028	·028	„
Iodide of Sodium . . .	·004	·004	·004	·004	„
Sulphuret of Sodium . .	·073	·042	·057	·018	„
Carbonate of Soda . . .	4·995	3·817	4·065	4·244	„
Sulphate of Soda . . .	2·171	2·201	2·176	2·243	„
Sulphate of Potash . . .	1·186	1·204	1·183	1·164	„
Carbonate of Lime . . .	1·217	1·012	1·413	1·330	„
Carbonate of Magnesia . .	·395	·192	·204	·257	„
Carbonate of Strontia . .	·002	·002	·002	·002	„
Carbonate of Lithia . . .	·002	·002	·002	·002	„
Carbonate of Protoxide of Iron	·073	·046	·046	·040	„
Silica	·508	·459	·455	·476	„
Organic Matter	·577	·713	·703	·751	„
	31·502	28·654	29·888	30·496	grains.
Gases.					
Nitrogen	9·00	7·79	9·14	6·41	per cent.
Carbonic Acid	89·40	92·91	90·31	93·25	„
Carburetted Hydrogen . .	·37	traces	·55	·26	„
Oxygen	1·23	traces	0·00	·08	„

Imported.

AIX-LES-BAINS (Savoy), altitude 768′. Climate mild. For drinking and for douching.

Recommended for rheumatism, eczema, gout, and sciatica.

Bonjean's Analysis of 16 oz. Troy=7680 grs.:—

	Sulphur Spring.	Alum Spring.	
Temperature, Fahr.	108·25°—111°.	108·25°—116·34°.	
Sulphate of Soda	·7374	·3256	grains.
Sulphate of Magnesia	·2709	·2380	„
Sulphate of Lime	·1229	·1152	„
	1·1312	·6788	(*continued*)

	Sulphur Spring.	Alum Spring.	
Continued.	1·1312	·6788	grains.
Sulphate of Alumina	·4209	·4761	,,
Sulphate of Iron	traces	traces	,,
Chloride of Sodium	·0613	·1075	,,
Chloride of Magnesium	·1322	·1690	,,
Fluoride of Calcium Phosphate of Lime and Alumina	·0191	·0200	,,
Iodide of Potassium	traces	traces	,,
Carbonate of Lime	1·1405	1·3901	,,
Carbonate of Strontia	traces	traces	,,
Carbonate of Protoxide of Iron	·0680	·0719	,,
Silica	·0384	·0330	,,
	3·0116	2·9464	grains.
Gases.			
Nitrogen	·03204	·08010	volumes.
Carbonic Acid	·02578	·01334	,,
Sulphuretted Hydrogen	·04140	·0	,,
Oxygen	·0	·01840	,,
	·09922	·11184	volumes.

ALET (Aude, France). Thermal 82° F. for baths and a ferruginous water 50°. Tonic, and useful in cases of debility and dyspepsia.

ALEXANDERBAD (Bavaria). Altitude 1754′. Climate rough, and unsuited for delicate lungs. Scenery good. Water chalybeate, 50° F., very exciting. There is a hydropathic establishment, and pine-foliage baths for rheumatism.

Contains 2¼ grains of solid constituents in 16 oz. Troy = 7680 grs.
about ¼ grain Carbonate of Iron,
and 28 cubic inches of Carbonic Acid.

ALEXISBAD (Germany, 2 miles W. of Harzgerode). In the romantic Selke valley.

Source, Selkenbrunnen, Saline; 1⅓ grain in 16 oz. troy.
,, Alexisbrunnen, Ferruginous; 3½ grains in 16 oz. troy.
,, Ernabrunnen, Ferruginous; 1⅓ grain in 16 oz. troy.

ALTWASSER (Prussian Silesia, 35 miles S.W. of Breslau). Altitude 1255′. Lies in a charming valley. Climate mild and bracing. Water alkaline, chalybeate, tonic, restorative, for drinking and for baths.

Fischer's Analysis of 16 oz. Troy = 7680 grs.

	Georgen-brunnen.	Ober-brunnen.	
Temperature, Fahr.	70°.	70°.	
Carbonate of Iron	·37	·306	grains.
Carbonate of Manganese	0	·13	,,
Chloride of Potassium	·09	·09	,,
Sulphate of Potash	0	.086	,,
Sulphate of Soda	·89	·40	,,
Sulphate of Magnesia	0	·25	,,
Carbonate of Magnesia	·72	·308	,,
Carbonate of Lime	2·88	·860	,,
Sulphate of Lime	0	·100	,,
Carbonate of Soda	1·21	·000	,,
Silica	·08	·52	,,
	6·54	3·18	
Carbonic Acid	106 in 100	50 in 100	volumes.

APOLLINARIS (Neuenahr). Imported and drunk at meals. (*See* Neuenahr.)

ARNSTADT (Germany, 10 miles W. of Erfurt). Altitude 926′. Climate healthy. Season, June to September. Its brine spring, when diluted, used for baths, and for poultices with bran or malt; for scrofula. Contains about 1825 grains of solids in 16 oz. Troy = 7680 grs. viz.:—

Chloride of Sodium	1723·	grains.
Chloride of Calcium	49·5	„
Chloride of Magnesium	39·	„
Sulphate of Lime	13·	„
Bromide of Magnesium	0·39	„

AUTEUIL (Seine, France). A ferruginous water having properties similar to that of Alet.

BADEN (near Vienna). Altitude 638′. Air bracing, temperature changeable. Sulphureous and saline.

Chiefly used for bathing, in which both sexes promenade. The mineralized mud is employed for cataplasms in rheumatism.

Keller's Analysis of 16 oz. Troy = 7680 grs.:—

	Römer-quelle.	Leopold's-quelle.	
Temperature,	92°—97° Fahr.	91·70°.	
Sulphuret of Magnesium	0·1250	·1180	grains.
Sulphate of Lime	5·6563	5·5473	„
Sulphate of Potash	·4892	·5560	„
Sulphate of Soda	2·1281	2·5766	„
Chloride of Sodium	1·9906	2·2659	„
Carbonate of Lime	1·3056	1·5936	„
Carbonate of Soda	·5329	·0530	„
Chloride of Magnesium	1·6156	1·5145	„
Silica	·1850	·2166	„
Organic Matter	·0431	0	„
Gases.	14·0714	14·4415	grains.
Carbonic Acid	1·433	3·2256	cubic inches.
Sulphuretted Hydrogen	·082	·6720	„
Nitrogen	·465	7·8711	„
Oxygen	·052	·9033	„
	2·032	12·6780	cubic inches.

BADEN-BADEN. Altitude 616′. Air pure and mild. Mean annual temperature 48° F. Season, May to October.

Baths for rheumatism and paralysis.

Bunsen's Analysis of 16 oz. Troy = 7680 grs.:—

	Hauptquelle. Temperature 155·7° F.	
Chloride of Sodium	16·520	grains.
Bicarbonate of Lime	1·273	„
Bicarbonate of Magnesia	·042	„
Bicarbonate of Protoxide of Iron	·037	„
Bicarbonate of Protoxide of Manganese	traces	
Bicarbonate of Ammonia	·051	„
Sulphate of Lime	1·556	„
Sulphate of Potash	·017	„
Phosphate of Lime	·021	„
Arseniate of Iron	traces	
Chloride of Magnesium	·097	„
Chloride of Potassium	1·258	„
Bromide of Sodium	traces	
Silica	·914	„
Alumina	·008	„
Nitrates	traces	
	22·093	grains.
Free Carbonic Acid	·299	grains.

The Lithia waters for gout and lithiasis:—

	Mur-quelle.	Fett-quelle.	
Chloride of Sodium	15·5534	16·9767	grains.
Chloride of Lithium	2·3694	·2315	,,
Chloride of Potassium	1·7985	·8137	,,
Chloride of Magnesium	·8022	·4406	,,
Chloride of Calcium	·5127		,,
Chloride of Copper		trace	,,
Bicarbonate of Lime	·9748	1·4760	,,
Bicarbonate of Magnesia	·2673	·0112	,,
Bicarbonate of Protoxide of Iron	·0029	·0112	,,
Bicarbonate of Protoxide of Manganese	trace	trace	,,
Sulphate of Lime	1·8524	1·3390	,,
Sulphate of Potash		·3344	,,
Sulphate of Strontia	·0052		,,
Sulphate of Baryta		trace	,,
Ammonia	trace	trace	,,
Arseniate of Iron	trace	·0038	,,
Silica	·3200	·4477	,,
	24·4588	22·0858	,,

BAGNÈRES-DE-LUCHON (South of France). Altitude 2000′. Season, May to October.

Contains about 2 grains to 20 oz. of Sulphurets of Iron, Manganese, Sodium. The springs range in temperature from 60° F. to 154° F.; water is clear; has a sulphureous odour; is good in lymphatic and cutaneous affections.

BARÉGES (Hautes-Pyrénées, France). Altitude 4000′. There are nine sulphureous springs. Temperature 86° to 111° F. Season, May to September. Useful in inveterate chronic rheumatism and skin diseases.

Analysis of 16 oz. Troy=7680 grs. Le Tambour Source:—

Sulphuret of Sodium	·360	grains.
Sulphate of Soda	·384	,,
Chloride of Sodium	·307	,,
Silica	·519	,,
Lime	·022	,,
Magnesia	·026	,,
Soda	·039	,,
	1·657	grains.
Gases.		
Nitrogen	·004	c. in.

Imported.

BELLTHAL (Rhenish Prussia, near Coblentz). Altitude 400′. Drunk as a table water.

Contents in 10,000 parts:—

Carbonate of Soda	2·7918
Carbonate of Potash	·6898
Silicate of Soda	·6974
Carbonate of Magnesia	2·5676
Carbonate of Lime	5·9773
Chloride of Sodium	·2738
Sulphate of Soda	·1243
Nitrate of Soda	·0745
Carbonate of Iron	·0198
Carbonate of Ammonia	·0076
Carbonate of Manganese	·0047
Phosphate of Lime	·0015
Alumina	·0026
Free Carbonic Acid	36·410 parts by volume

Imported.

BERKA (Duchy of Saxe-Weimar).

The sulphureous spring contains 13½ grains of solids in 16 oz. Troy = 7680 grs. For chronic rheumatism, anæmia, and great debility.

Sulphate of Lime	5·5 grains.
Carbonate of Lime	4·33 ,,
Sulphate of Soda	1 ,,
Sulphate of Magnesia	2 ,,
Chloride of Calcium	0·7 ,,
Gases.	
Carbonic Acid	3·4 c. inches.
Sulphuretted Hydrogen with Nitrogen	6·4 ,,

The chalybeate spring contains about 22 grains of solids in 16 oz. viz.:—

Sulphate of Lime	13·5 grains.
Carbonate of Lime	3·5 ,,
Chloride of Calcium	0·5 ,,
Chloride of Magnesium	0·5 ,,
Carbonate of Magnesium	0·4 ,,
Sulphate of Magnesia	3·0 ,,
Carbonate of Iron	0·3 ,,

BILIN (Bohemia). Altitude 645′.

Taken for indigestion and acidity of the stomach, and drunk as a table water.

Analysis of 16 oz. Troy = 7680 grs.:—

Carbonate of Soda	23·106 grains.
Carbonate of Lime	3·089 ,,
Carbonate of Magnesia	1·098 ,,
Carbonate of Lithia	·110 ,,
Carbonate of Iron	·080 ,,
Sulphate of Soda	6·350 ,,
Sulphate of Potash	·985 ,,
Chloride of Sodium	2·935 ,,
Phosphate of Alumina	·065 ,,
Silica	·244 ,,
	38·062 ,,
Free Carbonic Acid	15·092 cubic inches.
Carbonic Acid (as bicarbonate)	17·247 ,, ,,

Imported.

BIRMENSTORF (Switzerland). Altitude 1300′. A mild laxative. Dose, ½ to ¾ of a tumblerful half an hour before breakfast. Temp. 50° F.

Analysis of 1,000 parts according to Bolley:—

Sulphate of Potash	·1042
Sulphate of Soda	7·0356
Sulphate of Lime	1·2692
Sulphate of Magnesia	22·0135
Chloride of Magnesium	·4604
Carbonate of Lime	·0133
Carbonate of Magnesia	·0324
Magnesia (crenate of)	·1010
Peroxide of Iron	1·0107
Alumina	·0277
Silica	·0302
	31·0982

Imported.

BIRRESBORN (Rhenish Prussia). Altitude 1100′. A table water, drunk *ad lib*

Analysis of 1000 parts :—

Bicarbonate of Soda	2·851681
Bicarbonate of Lithia	·003346
Bicarbonate of Lime	·272988
Bicarbonate of Baryta Bicarbonate of Strontia	·000154
Bicarbonate of Magnesia	1·092873
Bicarbonate of Protoxide of Iron	·035116
Bicarbonate of Manganese	·000668
Biborate of Soda	traces.
Sulphate of Potash	·052091
Sulphate of Soda	·135926
Chloride of Sodium	·357620
Bromide of Sodium	·000363
Iodide of Sodium	·000005
Phosphate of Soda	·000228
Nitrate of Soda	traces.
Phosphate of Alumina	traces.
Silicic Acid	·024532
	4·827591
Free Carbonic Acid	2·333967
	7·161558

BOCKLET (near Kissingen). Altitude 620′. Pleasant residence.
Tonic, useful in diseases peculiar to females. Carbonic Acid Baths.

Temperature 50° F. *Analysis* of 16 oz. Troy=7680 grs. :—	Ludwig's-quelle. (Ludwig's Spring.)	Schwefel-quelle. (Sulphur Spring.)	Stahl-quelle. (Steel Spring.)
Sulphate of Soda	6·25	·25	2·54 grs.
Sulphate of Magnesia	0	0	3·23 ,,
Sulphate of Lime	·50	0	0 ,,
Chloride of Sodium	27·50	·25	6·55 ,,
Chloride of Magnesium	0·75	0	4·43 ,,
Carbonate of Soda	0	·50	0 ,,
Carbonate of Magnesia	1·25	·50	3·36 ,,
Carbonate of Lime	7·25	2·50	6·54 ,,
Carbonate of Iron	·65	·40	·61 ,,
Silica	·50	·10	·22 ,,
Gases.	44·65	4·90	27·48 ,,
Carbonic Acid	31	21·5	39·3
Sulphuretted Hydrogen	0	0·2	0

BONNES (Basses-Pyrénées, France). Altitude 2000′. Air cold and penetrating A sulphureous and saline water, less exciting than Baréges. Imported.
Contains in 16 oz. Troy=7680 grs., 5⅓ grains of solids.

BONNES (Basses-Pyrénées).
Increases the natural secretion of the skin and kidneys. Dose, ¼ to ½ a tumbler taken before breakfast with two or three spoonfuls of boiling milk.

Analysis of 1 gallon=70,000 grs. :—

Chloride of Potassium	2·40
Chloride of Sodium	17·59
Sulphate of Sodium	2·86
Silicate of Sodium	5·28
Sulphate of Calcium	11·14
Silica	1·02
Magnesium, Lithium, Nitrates, and Phosphates	traces.
Sulphuretted Hydrogen	1⅓ cubic inches.

BORCETTE or BURTSCHEID (near Aix-la-Chapelle).

There are two kinds of springs,—the warmer one, Mühlenbadquelle, 171° F., is free from Sulphuretted Hydrogen; the cooler, from 110° to 140°, contains Sulphuretted Hydrogen. Both kinds are used for baths.

BOURBOULE (la) (Puy-de-Dôme, France). Altitude 2600′.

Drunk for diseases arising from impoverished blood, skin diseases, rheumatism, gout, sciatica, &c.

Analysis of one litre "Choussy" Spring:—

Arsenious Acid (Arsenicum ·0075)	·0115	grammes.
Hydrochloric Acid	2·0447	,,
Sulphuric Acid	·1098	,,
Silica	·0420	,,
Oxide of Iron	·0053	,,
Lime	·0490	,,
Magnesia	·0092	,,
Soda	2.6395	,,
Potash	·0731	,,
Lithia	traces	,,
	4·9841	,,
Free Carbonic Acid	·3513	,,
Do. as Carbonates	1·3242	,,
	6·6596	,,

Analysis of one litre "Perrière" Spring:—

Arsenious Acid (Arsenicum ·0070)	·0108	grammes.
Chloride of Sodium	2·8406	,,
Chloride of Potassium	·1623	,,
Chloride of Magnesium	·0320	,,
Bicarbonate of Soda	2·8920	,,
Bicarbonate of Lime	·1905	,,
Sulphate of Soda	·2084	,,
Peroxide of Iron	·0021	,,
Silica	·0200	,,
Alumina	traces	,,
	6·3587	,,
Free Carbonic Acid	·0518	,,
	6·4105	,,

BUDA-PESTH (Hungary). Bitter Aperient Water.

In 16 oz. Troy = 7680 grs.

	Hunyadi Janos.		Royal Hungarian
	Liebig.	Bunsen.	Prof. Than.
Sulphate of Magnesia	122·8	171·64	138·17 grs.
,, Soda	122·1	173·18	114·43 ,,
,, Potash	·65	·92	2·18 ,,
,, Lime	—	—	11·62 ,,
Chloride of Sodium	9·98	13·05	22·13 ,,
Bicarbonate of Soda	6·11	5·20	13·19 ,,
Carbonate of Soda	—	—	2·09 ,,
Carbonate of Lime	7·16	6·12	,,
Carbonate of Strontia	—	·20	,,
Oxide of Iron and Alumina	·03	·004	·03 ,,
Siliceous Earth	·008	·08	·03 ,,
Carbonic Acid free and combined	4·00	4·0	2·53 ,,
	Imported.		Imported.

BUDA or **OFEN** (opposite Pesth, Hungary). Altitude 461′.

Used externally. Efficacious in chronic gout, rheumatism, eczema, and psoriasis. Internally, in gastric catarrh, gouty diathesis, ulceration of the stomach, obstinate constipation. There are three swimming baths.

Sigmundt's Analysis of 16 oz. of the Trinkquelle :—

Temperature, 141·5° Fahr.

Sulphate of Soda	2·95	grains.
Chloride of Sodium	·82	,,
Carbonate of Soda	2·02	,,
Carbonate of Magnesia	0·46	,,
Carbonate of Lime	3·12	,,
Silica	0·69	,,
Alumina	0·18	,,
Gases.	10·24	grains.
Carbonic Acid	5·72	c. inches.
Sulphuretted Hydrogen	traces.	

BUSSANG (Vosges, France). A ferruginous and alkaline water, mild, laxative, for weak digestion. Dose Half-a-pint half an hour before meals.

Analysis of 1 Litre.

Carbonate of Soda	·789	grammes.
Carbonate of Lime	·340	,,
Carbonate of Magnesia	·150	,,
Carbonate of Strontia	traces	
Carbonate of Iron	·017	,,
Crenate of Iron, Manganese, and traces of Chloride of Sodium	·078	,,
Sulphate of Soda and Lime	·110	,,
Silicate of Soda Silicate of Lime Silicate of Alumina	·002	,,
	1·486	,,
Free Carbonic Acid	·41	Litre.

Imported.

CARLSBAD (Bohemia). Altitude 1200′. Season, June to September.

Drunk for obstinate constipation, affections of liver, gout, rheumatism, and diabetes.

Göttl's Analysis of 16 oz. Troy = 7680 grs.:—

	Sprudel.	Schloss-brunnen.	Wolf's Analysis. Markt-Brunnen.
	162° F.	122° F.	119·3° F.
Sulphate of Soda	19·9606	10·145	17·9919 grs.
Carbonate of Soda	9·0624	8·555	9·4553 ,,
Chloride of Sodium	8·7245	8·463	8·3298 ,,
Sulphate of Potash	·3696	11·558	1·9603 ,,
Carbonate of Lime	2·0198	2·419	2·1418 ,,
Carbonate of Magnesia	·3996	·299	1·8987 ,,
Carbonate of Iron	·0307	·023	·0890 ,,
Phosphate of Alumina	·2150	·031	0 ,,
Silica	1·0520	·43	1·3271 ,,
Carbonate of Lithia	0	0	·0100 ,,
Carbonate of Strontia	0	0	·0377 ,,
Carbonate of Manganese	0	0	·0185 ,,
Iodide of Sodium	0	0	·0209 ,,
Bromide of Sodium	0	0	·0133 ,,
Phosphate of Soda	0	0	·0160 ,,
Fluoride of Sodium and Silicium	0	0	1·4288 ,,
Alumina and Peroxide of Iron	0	0	·0251 ,,
Gases.	41·8340	41·922	44·7642 grs.
Carbonic Acid	7·8033	0	11·7602
Nitrogen	·0318	0	·0530

Imported.

Giesshübler, Temperature 7·2 to 7·5 R=45·° to 45·5° F.

Liebig's Analysis of 16 oz. Troy=7680 grs. :—

Bicarbonate of Soda	9·6944532
Chloride of Sodium	0·3070264
Sulphate of Soda	0·3761548
„ Potash	0·5197317
Bicarbonate of Lime	2·7794533
„ Magnesia	2·0694743
„ Protoxide of Iron	0·0468486
„ „ Manganese	0·0375306
Silicic Acid	0·4456797
Bicarbonate of Lithia	0·0714685
Alumina	0·0201600
Organic Matter	0·0020474
Total of Solid Constituents	16·3700285
Real free Carbonic Acid Gas	20·6317593
Total Constituents	37·0017878

Imported and drunk at meals.

CAUTERET (Hautes-Pyrénées). Altitude 3000′. Climate mild and sheltered. Temperature of Sulphur baths 98° to 131° F. Season, June to September. Rich in iodine, and more exciting than Baréges. Imported.

CHALLES (Savoy). Sulphureous, milder than Baréges. Imported.

CHARLOTTENBRUNNEN (Silesia). Altitude 1437′. Sheltered. Climate mild and bracing.

Excellent arrangements for whey-cure. Is resorted to for chronic pulmonary catarrh and atonic dyspepsia.

Charlottenquelle (a mild chalybeate) contains 5½ grains of solids in 16 oz. Troy=7680 grs. Among them—

Carbonate of Iron	0·2 grains.
Carbonate of Soda	1·5 „
Carbonate of Lime	2·3 „
Carbonate of Magnesia	0·5 „
Carbonic Acid	18 c. in.

Elisenquelle (acidulous spring) contains 4 grains of solids in 16 oz. Amongst them—

Iron	traces.
Carbonic Acid	17½ c. in.

CHATELDON (France). Imported. } Are gaseous drinking-waters.
CONDILLAC (France). Imported.

CONTREXVILLE (Vosges, France). Altitude 1000′. Climate severe. Temperature of water 53° F. Season, 20th May to 15th September. Resorted to for affections of the urinary organs.

Analysis of the "Pavilion Spring," by Debray:—

Bicarbonate of Lime	·402 grains.
Bicarbonate of Magnesia	·035 „
Bicarbonate of Iron	·007 „
Bicarbonate of Lithia	·004 „
Sulphate of Lime	1·163 „
Sulphate of Soda	·236 „
Sulphate of Magnesia	·030 „
Silica	·015 „
Chloride of Potassium	·006 „
Chloride of Sodium	·004 „
Fluoride of Calcium	traces.
Arsenic	traces.
	2·304 „
Free Carbonic Acid	·080 „

Imported.

DRIBURG (Westphalia). Altitude 583′. Mean temperature 48·5° F. Rather strong chalybeate. Temperature 51° F. Contains 40 grains in 16 oz., chiefly Bicarbonate of Lime, Sulphates of Lime, Magnesia and Soda, and 17 grains of Carbonic Acid; the quantity of Iron not stated.

EILSEN (Northern Germany). Altitude 250′. Sulphureous springs.

Useful in gout, rheumatism, and paralysis.

Dumesnil's Analysis in 16 oz. Troy=7680 grs.

Temperature 59° F.	Georgenbrunnen.	Julianenquelle.	
Sulphate of Soda	5·8233	5·0873	grains.
Sulphate of Lime	15·2840	17·1933	„
Sulphate of Magnesia	5·0120	4·4933	„
Carbonate of Lime	2·3333	1·5413	„
Carbonate of Magnesia	·1620	·1866	„
Chloride of Magnesium	1·2940	2·0500	„
Phosphate of Lime	·0067	·0080	„
Peroxide of Iron	·0066	·0080	„
Silica	traces	·0746	„
	30·0051	30·6424	grains.
Gases.			
Sulphuretted Hydrogen	1·5740	2·096	c. in.
Carbonic Acid	1·4480	2·151	„
Nitrogen	·3166	·374	„
Carburetted Hydrogen	·0833	·110	„
Oxygen	·0786	·080	„
	3·5005	4·811	c. in.

EMS (on the Lahn, Germany). Altitude 291′. Air soft and balmy. Temperature steady.

Most useful in diseases of mucous membranes and uterine derangements, especially in barrenness, sluggish liver, and irritative dyspepsia.

Fresenius's Analysis of 16 oz. Troy=7680 grs. :—

	Krähnchen.	Kesselbrunnen.	Fürstenbrunnen.	Neuequelle.	
Temperature	85° F.	115° F.	95° F.	117° F.	
Bicarbonate of Soda	14·8376	15·1974	15·6031	15·93	grs.
Chloride of Sodium	7·0841	7·7705	7·5509	7·27	„
Sulphate of Soda	·1377	·0061	·1550	·10	„
Sulphate of Potash	·3286	·3937	·3014	·43	„
Bicarbonate of Lime	1·7246	1·8129	1·7760	1·78	„
Bicarbonate of Magnesia	1·5051	1·4360	1·5357	1·54	„
Bicarbonate of Iron	·0166	·0278	·0203	·03	„
Bicarbonate of Manganese	·0072	·0047	·0060	·01	„
Bicarbonate of Baryta Bicarbonate of Strontia	·0011	·0036	·0021	·002	„ „
Phosphate of Alumina	·0032	·0096	·0033	.009	„
Silica	·3797	·3648	·3777	·37	„
Total	26·0259	27·0272	27·3322	27·67	grs.
Carbonic Acid	8·3249	6·7886	6·9275	6·52	c. in.

Imported.

ENGHIEN (Paris). Altitude 52′. A valuable sulphureous water. Has five principal sources, Cotte, Deyeux, Péligot, Boulard, De la Pêcherie. Temperature from 50° to 57° F. The climate is not equal to the Pyrenees. Open from March to October. Imported.

FACHINGEN (Nassau, on the Lahn). Altitude 337′.

To correct acid in the stomach, and useful in diseases of kidney and bladder.

Fresenius's Analysis of 16 oz. Troy = 7680 grs. Temperature, 50° F.

Bicarbonate of Soda	28·0883	grains.
Bicarbonate of Lime	2·8960	„
Bicarbonate of Magnesia	2·2912	„
Bicarbonate of Iron	·1103	„
Bicarbonate of Strontia	·0008	„
Bicarbonate of Lithia	·0006	„
Sulphate of Soda	·1372	„
Phosphate of Soda	·0506	„
Phosphate of Lithia	·0002	„
Phosphate of Lime	·0004	„
Phosphate of Alumina	·0003	„
Phosphate of Silica	·2610	„
Fluoride of Calcium	·0027	„
Chloride of Sodium	4·5574	„
Chloride of Calcium	·0034	„
	38·3918	grains.

Gases.

Carbonic Acid	32·9750	c. in.
Nitrogen	·0256	„
Imported.	33·0006	c. in.

FRANZENSBAD (Bohemia). Altitude 1569′. Mean annual temperature 45° F.

For drinking and for baths. Highly successful in all forms of abdominal plethora, anæmia, and chlorosis. The moor-bath chalybeate for rheumatism and gout.

Analysis of 16 oz. :—	Wiesen-quelle.	Sabe-quelle.	
Temperature, Fahr.	51°	52·6°	
Carbonate of Iron	·376	·016	grains.
Carbonate of Manganese	·093	·004	„
Sulphate of Soda	25·223	17·933	„
Sulphate of Potash	·1362	0	„
Phosphate of Soda	·062	0	„
Chloride of Sodium	9.346	9·216	„
Bromide of Sodium Iodide of Sodium	traces	0	
Carbonate of Magnesia	1·190	·132	„
Carbonate of Lithia	·063	0	„
Carbonate of Lime	1·291	1·607	„
Carbonate of Strontia	·049	·003	„
Phosphate of Lime and Alumina	·007	·004	„
Silica	·056	·333	„
	45·108	38·568	grains.
Carbonic Acid	45·107	26·89	c. in.

	Franzens-quelle.	Kalte-Sprudel.	Louisen-quelle	
Temperature, Fahr.	52·9°	51°	53·9°	
Carbonate of Iron	·23	·200	·328	grains.
Carbonate of Manganese	·04	·004	0	„
Chloride of Sodium	9·23	8·600	6·766	„
Sulphate of Soda	24·50	26·930	21·416	„
Carbonate of Soda	5·17	7·173	5·498	„
Carbonate of Lime	1·82	1·600	1·600	„
Carbonate of Strontia	·003	·001	0	„
Carbonate of Magnesia	·67	·013	0	„
Carbonate of Lithia	·08	0	0	„
Phosphate of Lime and Magnesia	·032	·028	0	„
Silica	·47	·56	·228	„
	42·18	44·606	35·836	grains.
Gas.				
Carbonic Acid	40·84	39·4	32·53	c. inches.

FRIEDRICHSHALL (Saxe-Meiningen, near Hildburghausen). Situated in a charming valley. Altitude 920′. Bitter water. Alterative and aperient; used in diseases of the stomach, liver, and urinary organs.

Liebig's Analysis in 16 oz. Troy = 7680 grains :—

Sulphate of Soda	46·51	grains.
Sulphate of Magnesia	39·55	„
Chloride of Sodium	61·10	„
Chloride of Magnesium	30·25	„
Bromide of Magnesium	·37	„
Sulphate of Potash	1·52	„
Sulphate of Lime	10·34	„
Carbonate of Lime	·11	„
Carbonate of Magnesia	1·16	„
Silica	·33	„
	190·25	grains.
Carbonic Acid	5·32	c. in.

Imported.

GASTEIN (Austria). Altitude 3051′, surrounded by mountains. Mean summer temperature, 59° F. Specially useful in nervous exhaustion.

Chiefly used for bathing. Season July and August.

Wolf's Analysis of 16 oz. Troy = 7680 grs. :—

Temperature, from 95° to 118° Fahr.

Sulphate of Soda	1·51	grains.
Chloride of Sodium	·36	„
Carbonate of Lime	·36	„
Silica	·24	„
Carbonate of Soda	·04	„
Phosphate of Alumina	·04	„
Carbonate of Iron	·05	„
Carbonate of Manganese	·02	„
Sulphate of Potash	·01	„
Carbonate of Magnesia	·02	„
Fluoride of Calcium	traces	
Strontia	traces	
Organic Matter	traces	
	2·68	grains.
Gases.		
Nitrogen	69·112	per cent.
Oxygen	30·888	„

GEROLSTEIN (Rhenish Prussia). Altitude 1200′.

Analysis of 1 litre :—

Carbonate of Soda	·820436	grammes.
" Lithia	·001030	"
" Lime	·571430	"
" Baryta	·000089	"
" Magnesia	·456624	"
" Iron	·000316	"
" Manganese	·000167	"
Sulphate of Potash	·002868	"
" Soda	·102627	"
Chloride of Sodium	·251034	"
Bromide of Sodium	·000210	"
Iodide of Sodium	·000002	"
Phosphate of Soda	·000221	"
Silicic Acid	·083204	"
	2·290258	"
Carbonic Acid in combination with Carbonates as Bicarbonates.	·831988	"

Imported and drunk as a table water.

HOMBURG (Central Germany). Altitude 600′. Air pure and bracing.

The springs are laxative, slightly tonic, and useful in plethora, dyspepsia, hysteria, hypochondria, etc. Source Louis, discovered in 1855, contains iron and sulphur, 32 grains of salts, and 38 cubic inches of carbonic acid. The water is also used for baths. Ludwigs-brunnen is a pleasant drinking water. Both the Kaiser-brunnen and the Stahl-brunnen have a chalybeate taste. Open all the year. Season, May to September.

Liebig and Hofmann's Analysis of 16 oz. Troy = 7680 grs. :—

	Elizabeth-brunnen.	Kaiser-brunnen.	Ludwigs-brunnen.	Stahl-brunnen.	
Temperature, Fahr.	50°	52·25°	53·3°	50°	
Chloride of Sodium	79·15	104·94	47·96	79·86	grs.
Chloride of Potassium	0	·28	1·71	·18	"
Chloride of Magnesium	7·79	8·52	3·06	5·33	"
Chloride of Calcium	0	17·50	7·28	10·67	"
Carbonate of Iron	·46	·53	·42	·94	"
Sulphate of Lime	0	·17	·15	·15	"
Carbonate of Lime	10·99	·68	5·74	7·53	"
Carbonate of Magnesia	2·01	0	·10	0	"
Sulphate of Soda	·38	0	0	0	"
Silica	·32	·09	·20	·31	"
	108·87	132·71	66·63	104·97	grs.
Free Carbonic Acid	48·64	109·16	43·59	46·91	c. in.

Imported. Also the Salt evaporated to dryness imported.

HUNYADI-JANOS (*See* BUDA-PESTH).

ISCHIA (South Italy). Principal spring, Gurgitello. Temperature 158° F. Contains in 16 oz. Troy = 7680 grs., 135 grains, chiefly chloride of sodium, carbonate of soda, and carbonic acid. Serviceable in such cases as hot baths are usually employed, rheumatism, paralysis, skin disease, etc. Season, in the spring and summer. Whey cure.

Saline springs and sand baths. Temperature 108° to 133° F. Patients are immersed in these for rheumatism, gout, palsy, and scrofula.

ISCHL (Austria). Altitude 1400′. Air peculiarly soft and refreshing, and is its chief attraction. The brine from the salt-works, when diluted, is used for baths. Season, May to end of September.

KISSINGEN (Bavaria). Altitude 800′. Climate mild, dry, and salubrious. Pleasing and healthful place of residence.

The waters are laxative, and used in indigestion, obstructions of the liver, morbid conditions of the kidneys, giving tone to the organs. The season lasts four months, May to September. There is also a Kissingen bitterwasser, which closely resembles Friedrichshall.

Liebig's Analysis of 16 oz. Troy = 7680 grs. :—

	Rakoczi.	Pandur.	Maxbrunnen.	
Temperature, Fahr.	51°	51°	49°	
Chloride of Sodium	44·71	42·39	17·52	grains.
Chloride of Potassium	2·20	1·85	1·14	"
Chloride of Lithium	·15	·12	·004	"
Chloride of Magnesium	2·33	1·62	·51	"
Bromide of Sodium	·06	·05	0	"
Iodide of Sodium	traces	traces	0	"
Nitrate of Soda	·07	·02	·65	"
Sulphate of Magnesia	4·50	4·59	0	"
Sulphate of Lime	2·99	2·30	1·06	"
Phosphate of Lime	·04	·04	·03	"
Carbonate of Lime	8·14	7·79	4·62	"
Carbonate of Iron	·24	·20	0	"
Silica	·09	·03	·07	"
	65·70	61·30	28·10	grains.
Gases.				
Carbonic Acid	41·77	48·17	41·85	c. in.
Ammonia	·007	·029	0	"

Imported.

KOSEN (Saxony, in a valley sheltered from the N. and N.E. winds). Baths. Useful in scrofulosis.

Analysis of 16 oz. Troy = 7680 grs. :— Temperature, Fahr. 65°.

Chloride of Sodium	335·	grains.
Sulphate of Soda	2·2	"
Sulphate of Potash	2·4	"
Sulphate of Lime	33·5	"
Carbonate of Lime	1·0	"
Sulphate of Magnesia	7·9	"
Oxide of Iron	0·1	"
	382·1	grains.

KŒNIGSDORFF-JASTRZEMB (Upper Silesia). Not much known. Drunk for glandular enlargements.

Analysis of 16 oz. Troy = 7680 grs. :—

Chloride of Sodium	87·9	grains
Chloride of Potassium	0·5	"
Chloride of Calcium	4·25	"
Chloride of Magnesium	2·6	"
Iodide of Magnesium	·04	"
Bromide of Magnesium	·22	"
Carbonate of Lime	·33	"
Carbonate of Magnesia	·01	"
Carbonate of Iron	·03	"
Sulphate of Lime	·08	"
	95·96	grains.

KRANKENHEIL (Bavaria). Altitude 2467′. Climate pure, bracing, and mild.

Useful in scrofulous diseases of the skin.

Analysis of 16 oz. Troy = 7680 grs. :—

	Johann-Georgen-quelle.	Bernhard-quelle.	Anna-quelle.	
Sulphate of Potash	·09	·07	·15	grains.
Sulphate of Soda	·09	·03	2·25	„
Chloride of Sodium	1·79	2·27	·23	„
Iodide of Sodium	·01	·01	—	„
Bicarbonate of Soda	2·48	2·56	1·49	„
Bicarbonate of Lime	·70	·78	1·91	„
Bicarbonate of Magnesia . .	·22	·22	—	„
Bicarbonate of Iron	—	—	—	„
Bicarbonate of Manganese . .	—	—	—	„
Silicate of Alumina	·02	·01	1·84	„
Silicic Acid	·06	·07	·03	„
	5·50	5·07	7·98	grains.
Gases.				
Free Carbonic Acid	·32	·23	·63	c. in.
Sulphuretted Hydrogen . . .	·05	·07	·23	„

KREUZNACH (Rhenish Prussia). Altitude 285′. Climate warm, clear, and dry.

Kreuznach Salt: the Mother Lye of Kreuznach, which remains after the salt has crystallized out, contains 2484 grains of solids in the 16 oz.

A strongly iodized water, powerfully tonic and stimulant to the lymphatic system, used for constitutional syphilis, diseases of the skin, rheumatism, paralysis, scrofula, tuberculosis, and leucorrhœa; used also for baths. Season from June to September.

Analysis of 16 oz. Troy = 7680 grs. :—

	Elisen-quelle.	Oranien-quelle.	Brine-Spring.	
Temperature, Fahr.	54·5°	54·5°		
Chloride of Sodium	72·883	108·705	1311·89	grains.
Chloride of Calcium	13·389	22·749	241·00	„
Chloride of Magnesium . . .	4·071	0	73·22	„
Chloride of Potassium . . .	·624	·460	11·23	„
Chloride of Lithium	·613	0	0	„
Bromide of Magnesium . . .	·278	1·780	5·00	„
Iodide of Magnesium . . .	·035	·012	·63	„
Carbonate of Lime	1·693	·255	0	„
Carbonate of Magnesia . . .	·106	·130	0	„
Carbonate of Iron	0	·356	0	„
Silica	·129	·999	0	„
Phosphate of Alumina . . .	·025	·095	0	„
	93·846	135·541	1642·97	grains.

The water, the salt, and the brine are all imported.

KRONTHAL (Nassau). Altitude 512′. In a valley open to the south. Climate very mild.

Resorted to by persons suffering from bronchitis or affections of the lungs.

Löwe's Analysis of 16 oz. Troy = 7680 grs. :—

	Stahl-quelle.	Wilhelms-quelle.
Temperature, Fahr.	57°	61°
Chloride of Sodium	22·27	27·20 grains.
Chloride of Potassium	·77	·67 ,,
Chloride of Ammonium	·07	·04 ,,
Chloride of Calcium	·07	·16 ,,
Carbonate of Lime	4·17	5·10 ,,
Sulphate of Lime	·21	·23 ,,
Carbonate of Magnesia	·72	·72 ,,
Carbonate of Iron	·05	·10 ,,
Carbonate of Manganese	·02	·01 ,,
Silica	·66	·55 ,,
Organic Matter	·11	·01 ,,
	29·16	35·26 grains.
Carbonic Acid	40·0	33·0 c. in.

LABASSÈRE (Hautes-Pyrénées). Altitude 1800′.
Drunk for bronchial aud laryngeal catarrh.

Containing 3·68 grains of solids in 16 oz. Troy = 7680 grs., viz. :—
Temperature, 54°—57° Fahr.

Sulphuret of Sodium	·35 grains.
Chloride of Sodium	1·58 ,,
Chloride of Potassium	·02 ,,
Carbonate of Soda	·17 ,,
Silicate of Lime	·33 ,,
Silicate of Magnesia	·07 ,,
Alum (in excess)	·01 ,,
Iodine	traces.
Organic Matter	1·11 ,,

LANDECK (Prussian Silesia). Altitude 1398′. Climate bracing.

Vapour inhaled for bronchial catarrh. Resembles in purity Buxton and Clifton. There are moor-baths for rheumatism, etc.

Fischer's Analysis of 16 oz. Troy = 7680 grs. :—

	Wiesen-quelle. 81° F.	Georgen-brunnen. 83° F.
Sulphate of Soda	·542	·248 grain.
Bicarbonate of Soda	·545	0 ,,
Chloride of Potassium	0	·165 ,,
Chloride of Sodium	·005	0 ,,
Chloride of Calcium	·064	0 ,,
Crenate of Soda	0	·286 ,,
Sulphate of Lime	0	·008 ,,
Carbonate of Lime	·075	·081 ,,
Carbonate of Magnesia	·005	·009 ,,
Phosphate of Alumina, Iron, and Manganese	0	·012 ,,
Silica	·327	·271 ,,
	1·563	1·122 grain.
Gases.		
Sulphuretted Hydrogen	·015	traces c. in.
Carbonic Acid	·172	·26
Nitrogen	0	·62

LANGENBRÜCKEN (Baden). Altitude 440′. In a valley, with luxuriant foliage. Climate mild. Season, spring to autumn.

Useful in chronic catarrh of the bladder, rheumatism, and bronchial irritation.

Trinkquelle. Temperature, 52° Fahr. Contains 3½ grains of solids in 16 oz. Troy = 7680 grs. viz. :—

Sulphate of Soda	·25	grains.
Sulphate of Lime	·5	,,
Sulphate of Potash	·15	,,
Chloride of Sodium	·08	,,
Carbonate of Lime	2·12	,,
Carbonate of Magnesia	·35	,,
Carbonate of Iron	·07	,,
Silica	·01	,,
Gases.		
Sulphuretted Hydrogen	0·10	c. in.
Carbonic Acid	27·98	,,

Waldquelle. Temperature, 57° F. Contains 11¾ grains of solids in 16 oz. Troy = 7680 grs. viz. :—

Sulphate of Soda	1·63	grains.
Sulphate of Magnesia	3·88	,,
Sulphate of Lime	2·41	,,
Phosphate of Lime	·16	,,
Sulphate of Potash	·15	,,
Sulphuret of Calcium	·14	,,
Chloride of Potassium	·10	,,
Carbonate of Lime	1·81	,,
Carbonate of Magnesia	1·84	,,
Sulphuret of Iron	·03	,,
Alumina	·03	,,
Silica	·13	,,
Gases.		
Sulphuretted Hydrogen	·15	c. in.
Carbonic Acid	3·09	,,

LEUK (Switzerland). Altitude, 4275′, at the foot of the Gemmi. Climate rough and bracing.

Both sexes, in suitable dresses, promenade in these baths. They are useful in skin diseases, chronic swellings of the glands, in catarrh, and have also a diuretic action.

Brunner's Analysis of 16 oz. Troy = 7680 grs., of the Lorenzquelle :—

Temperature, 124° F.

Sulphate of Lime	12·712	grains.
Sulphate of Magnesia	1·991	,,
Sulphate of Soda	·509	,,
Sulphate of Strontia	·031	,,
Chloride of Sodium	·055	,,
Chloride of Potassium	·02	,,
Chloride of Magnesium	·027	,,
Carbonate of Lime	.357	,,
Carbonate of Magnesia	·002	,,
Carbonate of Iron	·024	,,
Silica	·102	,,
	15·830	grains.
Gases.		
Carbonic Acid	·267	c. in.
Oxygen	·192	,,
Nitrogen	·347	,,

LIPPIK (Slavonia).

Useful in hysteria.

Kleinbadquelle contains 20 grains of solids in 16 oz. Troy = 7680 grs., viz.:—

Temperature 111° F.

Sulphate of Soda	5·25	grains.
Chloride of Sodium	4·8	,,
Chloride of Calcium	·75	,,
Iodide of Calcium	·2	,,
Carbonate of Soda	9·5	,,
Carbonate of Magnesia	·75	,,
Carbonate of Lime	1·33	,,
Phosphate of Alumina	·02	,,
Silica	·08	,,

Gases.

Carbonic Acid	28·5	per cent.
Nitrogen	71·4	,,

LIPPSPRINGE (Prussian Westphalia). Altitude 378′, having beautiful walks for exercise. Climate mild, calming, and equable.

Useful in bronchial irritation and incipient tuberculosis. Season, June to August.

Arminiusquelle, in 16 oz. Troy = 7680 grs. are:—

Temperature 70° F.

Sulphate of Lime	4·25	grains.
Carbonate of Lime	5·27	,,
Sulphate of Soda	5·20	,,
Bicarbonate of Soda	1·60	,,
Sulphate of Magnesia	·80	,,
Carbonate of Magnesia	·60	,,
Carbonate of Iron	·14	,,
Chloride of Sodium	·86	,,
Chloride of Magnesium	·80	,,
Iodides	traces.	
	19·52	grains.

Gases.

Carbonic Acid	16·17	c. in.
Nitrogen	4·46	,,
Oxygen	·55	,,
	21·12	c. in.

LUCCA (Central Italy). Situate on the slope of a hill, surrounded with shady trees. Climate warm.

Employed externally and internally for skin diseases and chronic rheumatism. Season, June, July, and August.

Giulii's Analysis of 16 oz. Troy = 7680 grs. of thermal spring:—

Temperature, 116° F.

Sulphate of Lime	5·82	grains.
Carbonate of Lime	·39	,,
Carbonate of Magnesia	·06	,,
Chloride of Sodium	1·28	,,
Chloride of Magnesium	·32	,,
Alumina	·32	,,
Sulphate of Magnesia	1·18	,,
	9·37	grains.

LUHATSCHOWITZ (Moravia). Altitude 1600′. **Climate mild but moist.**

Useful in chronic bronchial, gastric, uterine, and **vaginal catarrh, especially if combined with scrofulosis; in congested liver and hemorrhoids, arising from sedentary habits.**

	Vincenz-brunnen.	Amand-brunnen.	Johann-brunnen.	Luisen-quelle.	Bade-wasser.	
Temperature, Fahr.	47·75°	45·7°	45·7°	48·6°		
Chloride of Potassium . .	1·79	1·59	2·14	1·61	1·85	grains.
Chloride of Sodium . . .	23·35	25·75	27·88	33·47	20·87	,,
Bromide of Sodium . . .	·25	·10	·07	·08	·11	,,
Iodide of Sodium . . .	·13	·12	·17	·18	·35	,,
Carbonate of Soda . . .	23·26	36·03	44·21	43·21	24·13	,,
Carbonate of Lithia . .	0	·01	·01	·01	0	,,
Carbonate of Magnesia .	·42	·56	·55	·51	·42	,,
Carbonate of Baryta . .	·07	·06	·04	·06	0	,,
Carbonate of Lime . . .	4·63	4·81	4·89	4·40	4·79	,,
Carbonate of Strontia . .	·09	·11	·07	·12	0	,,
Carbonate of Iron . . .	·11	·13	·09	·18	·15	,,
Silica	·39	·10	·41	·47	·14	,,
	54·85	69·5	80·7	84·4	59·7	grains.
Carbonic Acid	50·	29·	16·	27·6	28·	c. in.

MARIENBAD (Bohemia). Altitude 1900′. Air dry and pure. **Season, May** to September.

Springs are drunk as laxatives, and are useful in abdominal **enlargement**, gravel, gout, and derangement of the digestive organs. **Mud-baths** are applied to stimulate the skin, and to remove **glandular swellings.**

In 16 oz. Troy = 7680 grs. :—

	Kreuz-brunnen.	Ferdinand-brunnen.	Wald-quelle.	Wiesen-quelle.	Marien-quelle.	
Temperature, Fahr.	53·3°		43·25°	52°–54°		
Sulphate of Soda . . .	36.269	38·766	5·228	·883	·353	grs.
Bicarbonate of Soda . .	12·394	13·999	5·107	·704	0	,,
Chloride of Sodium . .	11·166	15·397	2·116	·369	·048	,,
Sulphate of Potash . .	·449	·499	1·495	0	0	,,
Bicarbonate of Lithia .	·077	·110	·009	0	0	,,
Bicarbonate of Lime . .	6·630	6·021	2·725	6·516	·436	,,
Bicarbonate of Strontia .	·017	·008	0	0	0	,,
Bicarbonate of Magnesia .	5·399	5·299	0	4·373	·061	,,
Bicarbonate of Iron . .	·482	·653	·187	·373	·035	,,
Bicarbonate of Manganese	·053	·166	·035	·161	0	,,
Phosphate of Alumina .	·054	·014	·011	0	0	,,
Phosphate of Lime . . .	·018	·015	0	0	0	,,
Silica	·079	·741	·507	·691	·189	,,
	73·736	81·515	20·091	14·070	1·197	grs.
Carbonic Acid	7·424	14·800	13·509	12·828	9·056	c. in.

Imported.

	Carolinen-brunnen.	Ambrosius-brunnen.	
Temperature, Fahr.	50°	50°	
Sulphate of Soda	2·79	1·86	grains.
Chloride of Sodium	·82	1·64	,,
Carbonate of Soda	·20	1·66	,,
Carbonate of Lime	3·66	2·89	,,
Carbonate of Magnesia	3·94	2·72	,,
Carbonate of Iron	·44	·34	,,
Silica	·46	·48	,,
Extractive Substance	·38	0	,,
Carbonic Acid	15·43	12·9	c. in.

MEINBERG (Germany). Altitude 634′. Situated in a charming fertile plain.

These waters are generally tonic, and good in facial neuralgia, relaxed condition of system, whether cutaneous or otherwise.

In 16 oz. Troy = 7680 grs. are contained as follows:—

	Trink-quelle.	Neu-brunnen.	Quelle im Stern.	Schwefel-quelle.	Kochsalz-quelle.	Acidulous Spring.	
Temperature.				61° F			
Sulphate of Soda	1·15	4·51	1·34	5·84	11·01	0	grs.
Sulphate of Magnesia	1·14	2·52	3·67	1·73	0	0·04	,,
Sulphate of Lime	0·28	3·45	15·16	8·33	13·46	0·18	,,
Chloride of Sodium	0	0	0	0	40·95	0·07	,,
Chloride of Magnesia	0·81	0·98	0·24	1·03	6·31	0·14	,,
Carbonate of Lime	1·45	2·65	1·17	2·14	6·03	5·02	,,
Carbonate of Magnesia	0·15	0·24	0·17	0·17	0·51	2·04	,,
Carbonate of Iron	0·08	0·07	0·01	0·008	0·07	0·005	,,
Silica	0·06	0.25	0·08	0·12	0·05	0·05	,,
Extractive Substance	0.57	0	0	0	0	0	,,
	5·96	14·73	23·36	19·48	73·44	7·57	,,
Gases.							
Carbonic Acid	34·36	0	1·83	2·12	9·74	18·49	c. in.
Sulphuretted Hydrogen	0	0	0	0·55	0	0	,,
Nitrogen	0·14	0	0	0	0	0	,,

MERGENTHEIM (Würtemburg). Altitude 591′. Charming situation. Climate mild. Mean annual temperature 51° F., mean summer temperature 64° F.

The concentrated bitter-water contains 235 grains in the 16 oz. Troy = 7680 grs. The water is used internally and externally in biliary obstructions, hemorrhoids, and lithiasis.

The "Quelle im Carlsbad" spring contains about 107 grains of solids in 16 oz. Troy = 7680 grs. viz.:—

Chloride of Sodium	51·25	grains.
Chloride of Potassium	·78	,,
Chloride of Lithium	·01	,,
Bromide of Sodium	·07	,,
Sulphate of Soda	21·89	,,
Sulphate of Magnesia	15·88	,,
Sulphate of Lime	9·86	,,
Carbonate of Magnesia	1·40	,,
Carbonate of Lime	5·45	,,
Carbonate of Iron	·05	,,
Silica	·45	,,
	107·16	grains.
Gases.		
Carbonic Acid	7·5	c. in.
Nitrogen	18·	,,

MONDORF (Luxembourg). Altitude 2278′. Surrounded by beautiful shady walks.

Extremely useful in hyperæmic conditions of the mucous membrane of the respiratory or intestinal functions, especially in leuco-phlegmatic anæmic individuals.

There is an artesian well here, 2278 feet deep, and the water out of it is 108·5° F.

Kirchhoff's Analysis of 16 oz. Troy = 7680 grs.:—

Temperature, 77° Fahr.

Chloride of Sodium	66·98 grains.
Chloride of Calcium	24·31 „
Chloride of Potassium	1·58 „
Chloride of Magnesium	3·25 „
Bromide of Magnesium	·76 „
Sulphate of Lime	12·61 „
Carbonate of Magnesia	·05 „
Carbonate of Iron	·22 „
Silica	·05 „
Arsenic Acid	·001 „
	109·911 grains.
Gases.	
Free Carbonic Acid	1·06 c. in.
Nitrogen	·47 „

NENNDORF (Prussian Westphalia). Environs charming.

Used for drinking and for baths, to increase the tone of the skin. Gas, douche, and mud baths are employed for gout and rheumatism, etc. Brine baths are also employed. Season, June to September.

In 16 oz. Troy = 7680 grs.:—

Temperature, 52° F.	Quelle uncer dem Gewölbe.	Trink-brunnen.	Bade-quelle.	Sool of Rodenberg.
Sulphate of Soda	5·22	4·91	1·11	10·81 grs.
Sulphate of Magnesia	2·83	2·54	1·89	10·01 „
Sulphate of Lime	7·15	6·31	5·56	14·82 „
Sulphate of Potash	0	0	0	0·10 „
Chloride of Sodium	0	0	0	49·84 „
Chloride of Magnesium	1·63	1·62	0·42	10·01 „
Chloride of Calcium	4·30	4·51	3·18	4·61 „
Silica	0·05	0·06	0	0·20 „
	21·4	20·7	12·19	90·0 grs.
Gases.				
Carbonic Acid	5·2	4·32	2·75	0·14 c. in.
Sulphuretted Hydrogen	1·21	1·20	0·61	0 „

NEUENAHR (Rhenish Prussia). Altitude 225′. Scenery picturesque and romantic. Climate mild.

Good for gout and rheumatism, scrofula, emphysema of the lungs, bronchial catarrh, uric acid diathesis, and all diseases of the mucous membrane.

Contents in 16 oz. Troy = 7680 grains:—

Temperature, Fahr.	Augusten-quelle. 90°	Mohr-Marien-sprudel. 102°	Bisch. Apollinaris-brunnen. 70°	Victoria-quelle.
Carbonate of Soda	5·99	5·62	9·65	10·80 grs.
Carbonate of Magnesia	1·77	2·68	3·39	3·74 „
Carbonate of Lime	1·68	1·61	·45	3·30 „
Chloride of Sodium	·71	·69	3·57	0·91 „
Sulphate of Soda	·58	·76	2·30	0·73 „
Oxide of Iron	·04	0·06	0·15	0·10 „
Alumina	·13			
Silica	·17	0·19	0·06	0·25 „
	11·11	11·66	19·59	19·83 grs.
Carbonic Acid	24·73	22·52	47·04	12·86 c. in.

Apollinaris is imported for drinking as a table water.

OREZZA (Corsica). Air warm. Temperature, 59° F.

Is a kind of ferruginous Seltzer Water, very agreeable to drink. It is drunk with pleasure and with benefit for indigestion, want of appetite, and general debility.

Analysis of 1000 grammes :—

Carbonate of Lime	·602 grammes.
Carbonate of Magnesia	·074 ,,
Carbonate of Protoxide of Iron	·128 ,,
Sulphate of Lime	·021 ,,
Chloride of Potash Chloride of Soda	·014 ,,
Aluminium	·006 ,,
Silicic Acid	·004 ,,
	·849 grammes.
Free Carbonic Acid	1·248 litres.

Imported.

OTTILIENQUELLE (Paderborn, Westphalia).

For incipient tuberculosis, great emaciation, etc. ; in short, they are both tonic and restorative.

Analysis of 16 oz. Troy = 7680 grains :—

Carbonate of Lime	2·5 grains.
Carbonate of Iron	·05 ,,
Chloride of Sodium	6·75 ,,
Sulphate of Lime	·5 ,,
Chloride of Calcium	·5 ,,
Chloride of Magnesium	·25 ,,
Iodine and Bromine	traces.
	10·55 grains.
Gases.	
Carbonic Acid	2·34 c. in.
Nitrogen	8·98 ,,
Oxygen	1·17 ,,

MARIENQUELLE (in the neighbourhood), a chalybeate, contains 4¾ grains of solids. Amongst them—

Carbonate of Lime	1·75 grains.
Bicarbonate of Iron	·45 ,,

PFAFFERS (Switzerland), altitude 2108′, and RAGATZ, altitude 1604′, which has the same water conveyed to it.

Pfaffers is situated in a ravine, and is the most valued; Ragatz is in an open country, with purer air. They are chiefly valued for the warmth of their springs. Season, June to September.

Capeller's Analysis of 16 oz. Troy = 7680 grains :—

Temperature, 100° F.

Carbonate of Magnesia	·87 grains.
Carbonate of Lime	·32 ,,
Sulphate of Soda	·62 ,,
Sulphate of Lime	·37 ,,
Chloride of Sodium	·21 ,,
Chloride of Magnesium	·16 ,,
Gases.	2·55 grains.
Oxygen	1·3 c. in.
Nitrogen	3·7 ,,
Carbonic Acid	4·15 ,,

PLOMBIÈRES (Vosges, France). Altitude 1310′. **Air bracing and pure, subject to change of temperature.**

Chiefly used as baths, and Dr. Hebra's beds are used to keep patients immersed for days together; most suitable for gout, rheumatism, spinal, and female complaints. There are, also, cool chalybeate springs for drinking. Often visited by the late Emperor Napoleon III.

Analysis of 16 oz. Troy=7680 grs.:—

Temperature, from 80° to 159° F.	Bain des Dames.	Bain Romain.
Silicate of Soda	·6257	·5278 grain.
Silicate of Potash	·0080	0 „
Silicate of Lime and Magnesia	·1530	·052 „
Chloride of Sodium Chloride of Potassium Chloride of Calcium	·2754	·2290 „
Sulphate of Soda	·6273	·3901 „
Arseniate of Soda	·0053	0 „
Silica	·0887	·3213 „
Alumina	·0760	·1980 „
Nitrogenous organic matter	·1530	0 „
	2·0024	1·6759 grains.

Imported.

POUGUES (Loire, France). Altitude 780′.

Analysis of "St. Leger" Spring:—

Bicarbonate of Lime	1·3269 grammes.
Bicarbonate of Magnesia	·9762 „
Bicarbonate of Soda with traces of Potash	·6362 „
Bicarbonate of Iron	·0206 „
Sulphate of Soda	·2700 „
Sulphate of Lime	·1900 „
Chloride of Magnesium	·3500 „
Silicic Acid and Alumina	·0350 „
Glairin	·0300 „
	3·8349 grammes.

PULLNA (Bohemia).

A bitter saline purgative, twice the strength of Seidlitz, useful in obstinate constipation.

Struve's Analysis of 16 oz. Troy = 7680 grs.:—

Sulphate of Soda	123·800 grains.
Sulphate of Potash	4·800 „
Sulphate of Lime	2·600 „
Carbonate of Lime	·770 „
Sulphate of Magnesia	93·086 „
Chloride of Magnesium	16·666 „
Carbonate of Magnesia	6·406 „
Phosphate of Lime	·003 „
Silica	·176 „
	248·307 grains.

Carbonic Acid Gas.

Imported.

PYRMONT (Waldeck). Altitude 404′. In a valley; the environs picturesque. Mean annual temperature, 48·5° F.

Chalybeate drinking springs, taste fresh and slightly ferruginous. The saline somewhat bitter; they are highly restorative. There is also a Grotto del Cane here.

Wigger's Analysis of 16 oz. Troy = 7680 grs. :—

Temperature, 51°—54½° F.	Trink-quelle.	Brodel-brunnen.	Augen-quelle.	Neu-brunnen.	Sool-quelle.	Myr. Sal. quelle.	Säur-ling.	
Sulphate of Lime . .	7·22	6·07	4·10	0	14·58	5·51	·31	grs.
Sulphate of Magnesia	2·69	5·53	4·56	3·47	2·33	0	·60	,,
Sulphate of Soda . .	2·14	0	1·71	7·34	5·29	12·24	·37	,,
Carbonate of Lime .	5·98	4·52	3·81	7·86	2·71	6·92	1·81	,,
Carbonate of Magnesia	·32	·24	·25	·96	·46	0	·16	,,
Carbonate of Soda .	0	4·78	·84	2.62	1·49	6·23	·30	,,
Carbonate of Iron . .	·49	·58	·13	·75	·08	·06	0	,,
Chloride of Sodium .	0	0	·44	4·38	61·68	65·49	·01	,,
Chloride of Magnesium	1·12	1·48	·45	·97	6·92	12·07	·12	,,
Silica	·49	·25	·10	·20	0	0	0	,,
	20·02	23·62	16·46	28·98	95·32	108·7	3·72	grs.
Gases.								
Carbonic Acid . .	44·52	38·51	36·28	39·28	17·46	26·19	21·84	c.in.
Sulphuretted Hydrogen	0	0	·39	0	0	0	0	

Imported.

RAKOCZI (*See* KISSINGEN), Bavaria.

RECOARO (Venetia). Altitude 1465′. Climate mild and bracing.

Situate at the foot of the Alps. Chiefly resorted to for the mild air and chalybeate springs. Season, May to October.

Cenedella's Analysis of 16 oz. Troy = 7680 grs. :—

Carbonate of Iron	·23 grains.
Carbonate of Lime	5·15 ,,
Carbonate of Magnesia	·47 ,,
Carbonate of Soda	0 ,,
Sulphate of Magnesia	5·00 ,,
Sulphate of Soda	·23 ,,
Sulphate of Lime	9·5 ,,
Chloride of Magnesium	·023 ,,
Silica	·319 ,,
	20·78 grains.
Gas.	
Carbonic Acid	17·99 c. in.

REICHENHALL (Upper Bavaria). Altitude 1407′. Mean temperature of spring 56° F.; of summer, 64° F.: of autumn, 54° F. Climate mild and bracing.

Used only for baths, for scrofula and incipient tuberculosis, and for inhalation. Season, July and August.

Of the nineteen saline springs, the most abundant is

The "Edelquelle," which contains in 16 oz. Troy = 7680 grs. :—

Chloride of Sodium	1723·10 grains.
Chloride of Ammonium	·19 ,,
Chloride of Magnesium	13·84 ,,
Bromide of Magnesium	·23 ,,
Sulphate of Soda	15·36 ,,
Sulphate of Potash	4·70 ,,
Sulphate of Lime	31·98 ,,
Carbonate of Lime	·07 ,,
Carbonate of Magnesia	traces.
Oxide of Iron and Alumina	·06 ,,
Silica	·08 ,,
	1789·61 grains.
Free Carbonic Acid	traces.

RIPPOLDSAU (Baden). **Altitude 1886′. Air pure, fresh, and bracing.**

Tonic resolvent for chlorotic and anæmic patients; also useful in pulmonary catarrh. Season, middle of May to middle of September.

Bunsen's Analysis of 16 oz. Troy = 7680 grs. :—

	Joseph-quelle.	Leopolds-quelle.	
Temperature, Fahr.	46°	49°	
Bicarbonate of Iron	·395	·455	grains.
Bicarbonate of Manganese	·033	·078	,,
Bicarbonate of Lime	12·939	14·598	,,
Bicarbonate of Magnesia	·543	2·888	,,
Sulphate of Soda	9·316	6·769	,,
Sulphate of Potash	·465	·271	,,
Sulphate of Lime	·428	·134	,,
Sulphate of Magnesia	1·866	·150	,,
Phosphate of Lime	0	·136	,,
Chloride of Magnesium	·650	·336	,,
Alumina	·034	·120	,,
Silica	·439	·663	,,
Phosphoric Acid Arsenic and organic matter	traces.	traces.	
	26·908	26·853	grains.
Gases.			
Free Carbonic Acid	14·936	15·985	c. in.
Nitrogen	·003	·003	,,
Oxygen	0	·003	,,

ROISDORF (Rhenish Prussia). Altitude 1000′.

Table water.

Analysis of 16 oz. Troy = 7680 grs. :—

	Trink-quelle.	Stahl-quelle.	
Carbonate of Soda	6·04	1·38	grains.
Carbonate of Lime	2·16	2·18	,,
Chloride of Sodium	14·60	3·86	,,
Carbonate of Magnesia	3·06	1·03	,,
Carbonate of Protoxide of Iron	·05	·20	,,
Silica	·12	·70	,,
	29·70	10·53	grains.
Carbonic Acid	19 c. in.		

Imported.

ROSBACH (Germany).

Analysis of 1 gallon = 70,000 grains :—

Chloride of Sodium	83·0	grains.
Carbonate of Lime	25·7	,,
Carbonate of Magnesia	12·6	,,
	121·3	grains.

Imported and drunk as a table water.

ROYAT (Puy-de-Dôme, France). **Altitude 1380′.**

These are alkaline springs, and are useful in cases of gastro-intestinal dyspepsia, rheumatism, and catarrhal affections of the genito-urinary passages.

. . . . .

Analysis:—

	Eugénie.	Cæsar.	St. Mark.	St. Victor.	
Bicarbonate of Soda	1·349	·392	·8003	·8886	grains.
Bicarbonate of Potash	·435	·286	·1701	·8886	,,
Bicarbonate of Lime	1·000	·686	·9696	1·0121	,,
Bicarbonate of Magnesia	·677	·397	·6568	·6464	,,
Bicarbonate of Iron	·040	·025	·0230	·0560	,,
Sulphate of Soda	·185	·115	·1463	·1656	,,
Phosphate of Soda	·018	·014	traces.	traces.	
Chloride of Sodium	1·728	·766	1·5655	1·6497	,,
Chloride of Lithium			·0350	·0350	,,
Silicic Acid	·156	·167			
Silica			·0945	·0950	,,
	5·588	2·848	4·4551	5·4370	grains.
Carbonic Acid	·377	1·229	1·709	1·492	grains.

Imported.

SAINT-GALMIER (Loire, France). Altitude 1350′.

Useful in dyspepsia.

Analysis in 1000 parts of "Badoit" spring:—

Bicarbonate of Soda	·560	grains.
Bicarbonate of Potash	·020	,,
Bicarbonate of Lime Bicarbonate of Magnesia	1·440	,,
Sulphate of Soda Sulphate of Lime	·200	,,
Silicate of Alumina	·134	,,
Chloride of Magnesium	·480	,,
	2·834	grains.
Free Carbonic Acid	1·25	volume.

Imported.

SANKT-MORITZ or **SAINT-MAURICE** (Upper Engadine, Switzerland). Altitude 5464′. Climate rough; environs romantic. Mean temperature of summer months, 51° F.

Tonic and stimulating, in debility, anæmia, neuralgia, scrofula, and in some conditions of lung disease. Used for drinking and for baths. Season, July and August.

The old spring contains in 16 oz. Troy = 7680 grs.:—

Temperature, Fahr. 42°.

Carbonate of Lime	5·5	grains.
Carbonate of Magnesia	1·0	,,
Carbonate of Iron	·18	,,
Carbonate of Manganese	·03	,,
Carbonate of Soda	1·46	,,
Sulphate of Soda	2·0	,,
Chloride of Sodium	·29	,,
Sulphate of Potash	·12	,,
Silica	·29	,,
Phosphoric Acid	·03	,,
Bromine, Iodine, and Fluorine	traces.	
	10·90	grains.
Carbonic Acid	39·5	c. in.

Imported.

The new spring contains 13½ grains of solids in 16 oz., viz.:—

More Lime and Magnesia than the old spring, 0·25 grain of Iron, and 40½ cubic inches of Carbonic Acid.

SCHINZNACH (Switzerland). Altitude 1060′. Mountainous and picturesque. Climate mild and salubrious.

There is only one spring; it is the most sulphureous of all the Continental waters, and the most frequented. The visitors are chiefly French. The baths are cooled to 90° F.; they are used for skin diseases, diseases of the bones, and local rheumatism.

Analysis of 16 oz. Troy = 7680 grs.:—

Temperature, 96° F.

Sulphate of Soda	9·87	grains.
Sulphate of Potash	·68	,,
Sulphate of Lime	1·20	,,
Chloride of Potassium	5·48	,,
Chloride of Magnesium	1·14	,,
Magnesia	·64	,,
Carbonate of Magnesia	·03	,,
Carbonate of Lime	1·09	,,
Oxide of Iron	·008	,,
Alumina	·07	,,
Silica	·09	,,
Gases.		
Carbonic Acid	2·38	c. in.
Sulphuretted Hydrogen	1·72	,,
Nitrogen	a trace.	

SCHLANGENBAD (Nassau). Altitude 933′. Mean annual temperature, 50° F. Locality romantic. Air mild and bracing. Season, June, July, and August.

The baths have a sedative and a beautifying influence on the skin, rendering it soft and juvenile; highly useful in nervous irritability arising from debility.

Fresenius's Analysis of 16 oz. Troy = 7680 grs.:—

Sulphate of Potash	0·091	grains.
Chloride of Potassium	0·004	,,
Chloride of Sodium	1·325	,,
Phosphate of Soda	0·004	,,
Carbonate of Potash	0·079	,,
Carbonate of Lime	0·250	,,
Carbonate of Magnesia	0·047	,,
Silica	0·258	,,
	2·558	grains.
Carbonic Acid	0·668	grain.

SCHWALBACH (Nassau). Altitude 909′. Climate bracing. Mean season temperature, 64° F.

Resorted to for quiet, and recruiting dilapidated health. Season, June, July, and August.

Fresenius's Analysis of 16 oz. Troy = 7680 grs.:—

	Stahlbrunnen.	Weinbrunnen.	Paulinenbrunnen.	Rosenbrunnen.	
Temperature, Fahr.	46°—51°	49°—50°	48°—50°		
Bicarbonate Protoxide of Iron	·643	·443	·65	·91	grain.
Bicarbonate Protoxide of Manganese	·141	·070	0	0	,,
Bicarbonate of Soda	·158	1·884	·45	·35	,,
Chloride of Sodium	·052	·066	·03	·32	,,
Sulphate of Soda	·061	·048	·02	·8	,,
Sulphate of Potash	·029	·057	0	0	,,
Bicarbonate of Lime	1·700	4·394	2·95	2·95	,,
Bicarbonate of Magnesia	1·630	4·467	2·75	·98	,,
Silica	·246	·357	0	0	,,
	3·660	11·786	6·86	5·57	grains.

Gases.	Stahl-brunnen.	Wein-brunnen.	Paulinen-brunnen.	Rosen-brunnen.	
Carbonic Acid	50·27	45·6	39·5	·26	c. in.
Sulphuretted Hydrogen	·003	·003	0	0	„

The first two are for drinking, the last two for bathing. The Stahlbrunnen is employed for general torpidity.

Imported.

SEIDLITZ (Bohemia).

Steinmann's Analysis of 16 oz. Troy = 7680 grs. :—

Sulphate of Magnesia	79·55	grains.
Sulphate of Soda	17·44	„
Carbonate of Lime	5·29	„
Carbonate of Magnesia	·20	„
Carbonate of Strontia	·009	„
Sulphate of Lime	4·14	„
Sulphate of Potash	4·41	„
Chloride of Magnesium	1·06	„
Carbonate of Protoxide of Iron and Manganese	·05	„
Silica	·05	„
Fluoride and Bromide of Magnesium	a trace.	
	112·199	grains.

SELTERS (Nassau). Altitude 800′. Furnishes the well-known *Seltzer-water.*

Kastner's Analysis of 16 oz. Troy = 7680 grs. :—

	Temperature 62° F.	
Bicarbonate of Soda	9·7741	grains.
Chloride of Sodium	17·2285	„
Chloride of Potassium	·2890	„
Sulphate of Soda	·2615	„
Phosphate of Lime	·0004	„
Phosphate of Alumina	·0002	„
Phosphate of Soda	·2615	„
Fluoride of Calcium	·0016	„
Bicarbonate of Lime	2·6678	„
Bicarbonate of Magnesia	2·5586	„
Bicarbonate of Iron	·1088	„
Bicarbonate of Manganese	·0032	„
Bromide of Sodium	·0002	„
Silica	·2500	„
	33·4054	grains.
Gases.		
Carbonic Acid	30·0100	c. in.
Nitrogen	·0285	„
Oxygen	·0046	„
	30·0431	c. in.

Imported.

SODEN (Nassau). Altitude 437′. Locality charming; air mild; temperature steady.

There are nineteen other springs not in use. In Germany these spring have a great reputation for chest diseases, are employed in atonic gout, scrofula, and diseases peculiar to females.

Analysis of 16 oz. Troy = 7680 grs.:—

	Milch-brunnen.	Warm-brunnen.	Wilhelms-brunnen.	Sool-brunnen.	
Temperature, Fahr.	74°	70°	57°	68°	
Chloride of Sodium	17·68	26 13	104·10	114·40	grains.
Chloride of Potassium . .	·16	1·29	2·53	3·52	,,
Sulphate of Lime	·19	·25	·98	·76	,,
Carbonate of Lime	2·73	4·47	8·38	8·63	,,
Carbonate of Magnesia . .	1·37	2·63	1·28	·29	,,
Carbonate of Iron	·16	·30	·30	·60	,,
Alumina	·01	0	·05	·88	,,
Silica	·16	·23	·30	·50	,,
	23·46	35·30	117·92	129·58	grains.
Carbonic Acid	17·0	35·9	48·9	14·0	c. in.

SPA (Belgium). Altitude 1030′. Sheltered. Air salubrious and bracing, but subject to sudden changes of temperature.

There are seven springs in all.

These chalybeates are highly beneficial in anæmia, debility, and depression of system. Season, August and September.

Struve's Analysis of 16 oz. Troy = 7680 grs. of Pouhon:—

Temperature, 52° Fahr.

Carbonate of Protoxide of Iron	·375	grains.
Carbonate of Protoxide of Manganese	·052	,,
Carbonate of Soda	·738	,,
Carbonate of Lime	·986	,,
Carbonate of Magnesia	1·123	,,
Sulphate of Potash	·079	,,
Sulphate of Soda	·038	,,
Chloride of Sodium	·050	,,
Phosphate of Lime	·013	,,
Phosphate of Alumina	·009	,,
Silica	·499	,,
	3·962	grains.
Carbonic Acid Gas	21·6	c. in.

Imported.

TARASP (Switzerland). Lower Engadine. Altitude 4265′. Scenery mountainous and cultivated.

Useful in abnormal obesity, oppressed functions of the glandular and vascular system, gout, rheumatism, and skin diseases, the mountain air contributing largely to invigorate the system. Season, June to September, when the weather is genial and constant. Mean temperature of July, 51° F.

Dr. Planta's Analysis of 16 oz. Troy = 7680 grs.:—

	Grosse-quelle. Temperature 37° F.		Kleine-quelle.	
Sulphate of Soda	16·547	grains.	16·417	grains.
Carbonate of Soda	27·229	,,	28·535	,,
Chloride of Sodium	29·401	,,	29·381	,,
Carbonate of Magnesia	5·076	,,	4·977	,,
Carbonate of Protoxide of Iron .	·152	,,	·140	,,
Carbonate of Lime	12·432	,,	12·402	,,
*Iodide of Sodium	1·536	,,		
Sulphate of Potash	2·998	,,	3·337	,,
Silica	·247	,,	·092	,,
Alumina	·002	,,		
Phosphoric Acid	·002	,,		
Carbonic Acid	34·887	,,	33·271	

Imported.

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* Dr. Killias has corrected Planta. He says the quantity of Iodide of Sodium is only 0·0015 grain.

TAUNUS (Frankfort). Altitude 390′.

Analysis of 10,000 parts :—

Chloride of Sodium	25·72
„ Potassium	2·70
Carbonate of Lime	13·70
„ Magnesia	1·76
„ Soda	·20
Sulphate of Lime	·58
Silica	traces.
Alumina	traces.
Phosphate of Lime	traces.
	54·66
Carbonic Acid compressed	28.94
Carbonic Acid by estimate in solution	17·35
	46·29

Imported and drunk as a table water.

TCHITLI (Turkey). Bicarbonate of Soda Spring.

Rises at 55° F., sp. g. 1005.

Contents of a litre = 35 fluid oz.

Bicarbonate of Soda	4·554	grammes.
„ „ Potash	·148	„
„ „ Magnesia	·365	„
„ „ Lime	·367	„
Sulphate of Soda	·132	„
Phosphate of Soda	·061	„
Chloride of Sodium	·066	„
Protoxide of Iron	·005	„
Iodide of Sodium	a trace.	
Silex	·057	„
Free Carbonic Acid	·475	„
Imported.	6·230	grammes.

TOEPLITZ or **TEPLITZ** (Bohemia). Altitude 648′. Sheltered. Climate mild and salubrious. Mean annual temperature, 50° F.

There are several springs, ranging from 78° to 120° F., nine bathing establishments, and mud-baths also. The baths are best suited to nervous patients, very efficacious in chronic rheumatism, gout, paralysis, and neuralgia.

Wolf's Analysis of 16 oz. Troy = 7680 grs. :—	Haupt-quelle. Temperature, 120° F.	
Sulphate of Potash	0·098	grains.
Sulphate of Soda	·209	„
Carbonate of Soda	2·635	„
Phosphate of Soda	·014	„
Fluoride of Silicium	·351	„
Chloride of Sodium	·433	„
Carbonate of Lime	·330	„
Carbonate of Strontia	·027	„
Carbonate of Magnesia	·088	„
Carbonate of Protoxide of Iron	·019	„
Carbonate of Protoxide of Manganese	·021	„
Sulphate of Alumina	·020	„
Silica	·443	„
Crenic Acid	·034	„
	4·803	grains.

VALS (France). Altitude 2475′.

Beneficial in lithiasis, indigestion, syphilitic and skin diseases, and scrofula.

M. Henri's Analysis of 1 litre (35 fluid oz.):—

	Saint-Jean.	Pré-cieuse.	Dé-sirée.	Rigo-lette.	Magde-leine.
Temperature	66° F.	66° F.	68° F.	68° F.	66° F.
Bicarbonate of Calcium	0·3100	0·630	0·571	0·259	0·520
Bicarbonate of Magnesia	0·1200	0·750	0·900		0·672
Bicarbonate of Soda	1·4800	5·940	6·040	5·800	7·280
Bicarbonate of Potash	0·0400	0·230	0·263	0·265	0·255
Bicarbonate of Protoxide of Iron with trace of Manganese	0·0060	0·010	0·010	0·024	0·029
Chloride of Sodium and Potassium	0·0600	1·080	1·100	1·200	1·016
Sulphate of Soda	0·0540	0·185	0·200	0·220	0·235
Sulphate of Calcium	0·0700				
Alumina	0·0110	0·060	0·058	0·060	0·097
Bicarbonate of Lithia	traces.	traces.	traces.	traces.	traces.
Arseniate of Soda					
Alkaline Ioduret					
Organic Matter					
Grammes	2·1510	8·885	9·142	7·828	9·104
= Grains	33	136	141	120	140
Carbonic Acid Gas	0·4250	2·218	2·145	2·095	2·050

Imported.

Saint-Jean, sedative; Désirée, Précieuse, laxative; Rigolette, Magdeleine, renovating; also Dominique, tonic.

VERNET (Eastern Pyrenees). The principal sources of the ancient Thermæ used by the Romans.

There are three springs, temperature 48° F., 91° F., and 137° F. Here Ibrahim Pasha resided. By means of pipes fed by the thermal water the apartments are kept at a comfortable warmth (54° to 59° F.) the whole of the winter (most desirable for phthisical patients), so that the waters can be taken at all seasons. Mean temperature of the atmosphere in October, 61° F.; in November, 51° F.; showing a mild and equable climate.

VICHY (Central France). Altitude 787′. Locality charming; climate very mild, hot in summer.

Useful in kidney diseases and diabetes, also in gout and hepatic derangement.

Both for drinking and bathing. Season, May to October.

Bouquet's Analysis of a litre (35 fluid oz.):—

	Grande Grille.	Hôpital.	Célestins.	Hauterive.
Temperature	106° F.	86° F.	57·6° F.	59° F.
Carbonic Acid	0·908	1·067	1·299	2·183
Bicarbonate of Soda	4·883	5·029	4·101	4·687
Bicarbonate of Potash	0·352	0·440	0·231	0·189
Bicarbonate of Magnesia	0·303	0·200	0·554	0·501
Bicarbonate of Strontia	0·003	0·005	0·005	0·003
Bicarbonate of Lime	0·434	0·570	0·669	0·432
Bicarbonate of Protoxide of Iron	0·004	0·004	0·004	0·017
Bicarbonate of Protoxide of Manganese	A trace.	A trace.	A trace.	A trace.
Sulphate of Soda	0·291	0·921	0·314	0·291
Phosphate of Soda	0·130	0·046	A trace.	0·046
Arseniate of Soda	0·002	0·002	0·003	0·002
Borate of Soda	A trace.	A trace.	A trace.	A trace.
Chloride of Sodium	0·534	0·518	0·550	0·534
Silica	0·070	0·050	0·065	0·071
Organic Matter, Bituminous	A trace.	A trace.	A trace.	A trace.
Grammes	7·914	8·222	7·865	8·946
Grains =	122	126	121	138

Imported.

WEILBACH (Nassau). Altitude 420′. Situated on a fertile declivity. Climate mild.

The water is generally warmed before being drunk.

Good in chest diseases, in gout, rheumatism, and herpetic affections, and in lead and mercury poisoning.

Fresenius's Analysis of 16 oz. Troy = 7680 grs. :—

Sulphur Spring, Temperature 57° F.		New Soda-Lithia, Temperature 54·5° F.		
Bicarbonate of Soda	3·123		7·3748	grains.
Bicarbonate of Lithia	·006		·0452	,,
Bicarbonate of Baryta	·009	Carbonate of Iron	·0193	,,
Bicarbonate of Strontia	·001	Carbonate of Manganese	·0039	,,
Chloride of Sodium	2·083		9.6677	,,
Chloride of Potassium	·214	Sulphate of Soda	1·7073	,,
Sulphate of Potash	·298		·4233	,,
Phosphate of Alumina	·001	Bromide of Sodium	·0056	,,
Phosphate of Lime	·002	Iodide of Sodium	·0010	,,
Carbonate of Lime	2·909		·7504	,,
Carbonate of Magnesia	2·758		·5563	,,
Silica	·111		·0943	,,
Organic Matter	·037	Carbonate of Ammonia	·0871	,,
	11·566		20·6581	,,
Gases.				
Carbonic Acid	3·126 c.in.	Carbonic Acid	5.9553	c. in.
Sulphuretted Hydrogen	·169 ,,	Sulph. Hydrogen	·0026	,,

Imported.

WIESBADEN (Nassau). Altitude 346′. Open to the south, with charming environs. Mean annual temperature 51° F. Season, May to September.

There are twenty-three springs; the Kochbrunnen is the principal.

Useful in chronic rheumatism and gout. The baths are allowed to cool before using them.

Fresenius's Analysis of 16 oz. Troy = 7680 grs. :—

Temperature, 160° F.

Chloride of Sodium	52·50	grains.
Chloride of Potassium	1·12	,,
Chloride of Lithium	·001	,,
Chloride of Ammonium	·130	,,
Chloride of Calcium	3·620	,,
Chloride of Magnesium	1·570	,,
Bromide of Magnesium	·030	,,
Sulphate of Lime	·690	,,
Silica	·460	,,
Carbonate of Lime	3·210	,,
Carbonate of Magnesia	·080	,,
Carbonate of Protoxide of Iron	·040	,,
Carbonate of Protoxide of Manganese	·004	,,
Phosphate of Lime	·003	,,
Arseniate of Lime	·001	,,
Silicate of Alumina	·004	,,
	63·463	
Gases.		
Carbonic Acid	16·72	c. in.
Nitrogen	·10	,,

WILDBAD (Würtemberg). Altitude 1300′. Scenery wild and romantic. Season, June to September, when the weather is hot; the other months very cold.

There are about fifty warm springs.

These baths are used in chronic rheumatism and gout, and in paraplegic paralysis of the lower extremities. Plethoric habits require care in using the baths.

Analysis of 16 oz. Troy = 7680 grs. :—

Temperature, 96° F.

Chloride of Sodium	1·82	grains.
Carbonate of Soda	·53	,,
Sulphate of Soda	·40	,,
Sulphate of Potash	·20	,,
Carbonate of Lime	·34	,,
Carbonate of Magnesia	·70	,,
Carbonate of Protoxide of Iron and Manganese	·29	,,
Silica	·39	,,
	3·58	grains.

Gases.

Carbonic Acid	
Nitrogen	
Oxygen	

[The above have been condensed from the works of Dr. Sutro, Dr. Althaus, Dr. Glover, and the various pamphlets issued at the sources of the several Spas.]

The following are sold in bottles :—

ADELHEIDSQUELLE (Heilbrunn, Germany). Contains a large proportion of Salts of Bromine and Iodine; acts powerfully on the glandular, lymphatic, and cutaneous systems. *Vide* analysis.

ÆSCULAP (Hungary). A recently imported water, which Professor Tichborne has compared with Hunyadi Janos, as being equally purgative, and more antacid, its action is gentle, and at the same time prompt and efficacious.

AIX-LA-CHAPELLE (Rhenish Prussia). For cutaneous diseases, &c.

* ALET (France). Chalybeate. Useful in cases of debility.

APOLLINARIS (Neuenahr). Acidulous, gaseous, and combines the properties of Seltzer and Ems (Kränchen). Good for sickness, dyspepsia, and bad appetite. When impregnated with Carbonic Acid is drunk at meals.

* BARÉGES (France, *Hautes-Pyrénées*). Sulphureous; effective in skin diseases, scrofula, diseased bone, and ulcers. *Vide* analysis.

* BIRMENSDORFF (Switzerland). Alterative bitter saline, consisting chiefly of Sulphates of Lime, Magnesia, and Soda.

BONNES (France, *Basses-Pyrénées*). Sulphureous; is highly extolled for incipient consumption, scrofula, rheumatism, and as a purifier of the blood. *Vide* analysis.

BOURBOULE, LA (France, *Puy-de-Dôme*). For impoverished blood, gout, &c.

BUSSANG (France, *Vosges*). Saline chalybeate; strengthens the digestive organs, acting mildly on the bowels and kidneys.

CARLSBAD (Sprudel, 165° F. Mühlbrunnen, 127° F., and Schlossbrunnen). Alkaline and gaseous; Sprudel is the favourite; drunk for bilious affections, gall stones, jaundice, gout, and gravel; are powerfully purgative. *Vide* analysis.

CARLSBAD-SALT. In bottles.

* CAUTERETS (France, *Hautes-Pyrénées*). Sulphureous; more exciting than Baréges and Bonnes; useful in skin diseases, rheumatism, and scrofula.

* CHALLES (Savoy). Sulphureous; milder in action than Baréges.

CONTREXVILLE (France, *Vosges*). Alkaline, chalybeate; promotes circulation of the blood, good in chlorosis, gastralgia, etc.

EMS (Kessel and Kränchen, Nassau). Saline, gaseous, preferred to Carlsbad in nervous irritability, good in pulmonary as well as scrofulous complaints, gout, etc. *Vide* analysis. EMS-SALT in bottles.

ENGHIEN (Paris, Montmorency). A valuable sulphureous water, useful in glandular affections, and as a general tonic.

FACHINGEN (Nassau). Acidulous, gaseous; a favourite beverage, acting on the kidneys and bladder, and counteracting the tendency to lithic acid. *Vide* analysis.

FRIEDRICHSHALL, Bitter Water (Saxe-Meiningen). Alterative, aperient; acting on the liver and pancreas; similar to Pullna. *Vide* analysis. It is very largely consumed in England, being a most valuable alterative and aperient; it is made warm and drunk in doses of half a tumblerful in the morning twice a week. The importations are frequent, as it is bottled at the Spring throughout the year except in frosty weather.

HOMBURG (Central Germany). More active than Kissingen Rakoczi, and better suited to a torpid state of bowels. *Vide* analysis. Also Homburg Salt.

HUNGARIAN BITTER WATER (Royal), like Hunyadi Janos.

HUNYADI JANOS. See BUDA-PESTH. Bitter aperient.

KISSINGEN (Maxbrunnen, Bavaria). Saline, gaseous; less exciting and more aperient than Carlsbad. (Rakoczi, Pandur.) Saline, gaseous; aperient, alterative, deobstruent, with a specific action on the uterine system of females. *Vide* analysis.

KISSINGEN, Bitter Water, is similar to that of Friedrichshall.

KREUZNACH (Elizabeth, Prussia). Saline; contains Iodine; alterative, tonic, and renovating, useful in lymphatic and torpid habits. *Vide* analysis. KREUZNACH-SALT in bottles.

LUHATSCHOWITZ (Moravia, Austria). Contains Bromide and Iodide and Chloride and Carbonate of Sodium.

MARIENBAD (Kreuzbrunnen, Bohemia). A gaseous bitter saline, similar in properties to Carlsbad, but milder. *Vide* analysis.

NEUENAHR (on the Rhine, Apollinaris). Gaseous saline; exhilarating, diuretic, slightly acting on the liver and stomach. *Vide* analysis.

OFEN (Rakoczi), Kissingen.

OREZZA (Corsica). Chalybeate, with a trace of Manganese, and highly sparkling; useful in gastralgia, sluggish liver, and spleen, chlorosis, amenorrhœa, and leucorrhœa.

POUGUES (France). Saline, slightly chalybeate, contains 34 grs. in 20 oz., chiefly Bicarbonates of Lime and Magnesia, with Carbonic Acid; drunk for gravel and catarrh of the bladder.

PULLNA (Bohemia). A bitter saline; mild and effective purge, acting without griping. *Vide* analysis.

PYRMONT (Westphalia). A valuable chalybeate in dyspepsia, debility from exhausting diseases, and constitutional weakness. *Vide* analysis.

ROYAT (France, *Puy-de-Dôme*). Alkaline spring, good in cases of gastro-intestinal dyspepsia, rheumatism, &c.

SAINT-MORITZ (Switzerland). Tonic, and stimulating in debility.

SCHWALBACH (Weinbrunnen and Stahlbrunnen, Nassau). Chalybeate; pleasant to drink, tonic, alterative, and restorative; the Weinbrunnen preferred.

* **SEIDLITZ**, Bitter water (Bohemia). Purgative.

SOULTZMATT (France). Acidulated, gaseous; much used in France as a beverage.

SPA, Pouhon; Prince de Condé. Gaseous, chalybeate waters; restorative in cases of debility consequent upon disease, bodily or mental exertion, for both sexes; either of them may be used.

TARASP (Switzerland). Drunk for abnormal obesity, &c., &c.

VALS (France). Strongly resembling those of Vichy, but less lowering; the principal are, Magdeleine, Précieuse, and Rigolette. *Vide* analysis.

VICHY, Source de l'Etat (France). Saint-Yorre, alkaline; Parc, 71° F., alkaline; Des Dames, 61° F., chalybeate, most gaseous; Célestins, 39° F., for gravel and gout; Hauterive, 59° F., Hôpital, 87° F., for indigestion; Grande Grille, 107° F., for liver, dyspepsia, and intermittent fever, loss of appetite, congestion of liver and spleen; Lardy, chalybeate, for anæmia.
VICHY-SALT in bottles. *Vide* analysis.

* WEILBACH (Nassau). A weak sulphureous water, and largely impregnated with Carbonic Acid Gas; used in chest diseases.

WILDUNGEN (Waldeck). Alkaline, diuretic, antilithic, tonic; restorative, useful in leucorrhœa, spermatorrhœa, and, mixed with milk, for chronic bronchial affections.

WOODHALL and PURTON British waters
BETHESDA and MISSISQUOI from the United States } are also sold in bottles.

Those marked with an asterisk are not so frequently in demand, and should be ordered in advance.

The following waters are drunk at table:—

The Imperial pint of water (20 oz.) contains of Saline Matter as follows:—

Apollinaris	(Rhenish Prussia)	22	grains.	Chiefly Carbonate of Soda.
Bellthal	(Rhenish Prussia)	30	,,	Carbonates of Lime, Magnesia, & Soda.
Bilin	(Bohemia)	43	,,	Chiefly Carbonate of Soda.
Birresborn	(Rhenish Prussia)	42	,,	Carbonate of Soda and Chloride of Sodium.
Condillac	(France, Drôme)	11	,,	Chiefly Bicarbonate of Lime.
Evian	(Switzerland)	5	,,	,, Bicarbonate of Soda.
Gerolstein	(Rhenish Prussia)	16	,,	Carbonates of Lime, Magnesia, and Soda.
Gieshübler	(Bohemia)	12	,,	Chiefly Carbonate of Soda.
Harzer	(Germany)	11	,,	Carbonates of Lime and Soda, and Chloride of Sodium.
Roisdorf	(Rhenish Prussia)	34	,,	Chloride of Sodium, Carbonates of Soda, Lime and Magnesia.
Rosbach	(Homburg)	15	,,	do. do.
St. Galmier	(Badoit, France)	30	,,	do. do.
Seltzer	(Nassau)	38	,,	Chloride of Sodium and Carbonate of Soda.
Sulis	(Bath, Somerset)	20	,,	Sulphates of Lime and Soda, Chloride of Magnesium and Sodium.
Taunus	(Frankfort)	30	,,	Carbonate of Lime and Chloride of Potassium and Sodium.
Wilhelmsquelle	(Frankfort)	21	,,	Chloride of Sodium, Carbonate of Lime.

Comparatively Pure.

Bristol.
Buxton.
Clifton.
Gastein, 118°.
Malvern.
Schlangenbad, 50°.
Wilbad, 98°.
Winfred.

Alkaline and Gaseous.

Chateldon.
Condillac.
Contrexville, 53°.
Ems, 85° to 117°.
Fachingen.
Gieshübler.
Neuenahr, 70° to 102°.
Vals.
Vichy.
Wildungen, 96°.

Saline.

Homburg, 50° to 52°.
Kissingen, 49°, to 51°.

Bitter Saline.

Birmensdorff.
Cheltenham.
Epsom.
Friedrichshall.
Hunyadi Janos.
Hungarian (Royal).
Kingswood.
Leamington.
Marienbad.
Pullna.
Seidlitz.

Saline containing Bromine and Iodine.

Achselmannstein, 61°.
Adelheidsquelle, 50°.
Arnstadt.
Carlsbad, 119·3° (Markt-brunnen).
Durkheim.
Ischl.
Koenigsdorff-Jastrzemb.
Kissingen, 49° to 51°.
Krankenheil.
Kreuznach, 54·5°.
Luhatschowitz, 48·6°.
Mergentheim.
Mondorf, 77°.
Reichenhall.
Tarasp, 37°.
Wiesbaden, 160°.
Woodhall.

Saline containing Lithia.

Baden-Baden.
Carlsbad, 119° (Markt-brunnen).
Franzensbad, 45°.
Kissingen, 47° to 51°.
Weilbach, 54°.

COOL, AND THERMAL, UNDER 98° F.

Sulphureous.

Baden, Austria, 92°.
Berka.
Bonnes, 91·5°.
Challes.
Eilsen, 59°.
Enghien.
Krankenheil.
Labassère, 54° to 57°.
Landeck, 81° to 83°.
Meinburg, 61°.
Nenndorf, 52°.
Schinznach, 96°.

Chalybeate and Gaseous.

Alet.
Alexandersbad.
Alexisbad.
Altwasser.
Auteuil.
Berka.
Bocklet, 50°.
Bossang.
Charlottenbrunn.
Driburg, 51°.
Kösen, 65°.
Kronthal, 61°.

Chalybeate,—*continued.*

Lippspringe, 70°.
Marienbad.
Meinburg.
Orezza.
Pougues.
Pyrmont.
Recoaro.
Rippolsdau.
Saint-Maurice, 42°.
Schwalbach, 46° to 51°.
Soden, 68° to 74°.
Spa, 52°.

HOT SPRINGS.

Wildbad, 98°.
Pfaffers, 100°.
Neuenahr, 102°.
Vichy, 106°.
Lippik, 111°.
Lucca, 116°.
Ems, 117°.
Gastein, 118°.
Bath, 118° to 120°.
Teplitz, 120°.
Leuk, 124°.
Cauterets, 131°.
Aix-la-Chapelle, 131°.
Verney, 137°.
Ofen, 141°.
Baden-Baden, 155°.
Ischia, 158°.
Plombières, 159°.
Wiesbaden, 160°.
Carlsbad, 162°.
Borcette, 171°.

Sulphureous.

Barèges, 111°.
Aix-les-Bains, 116°.
Aix-la-Chapelle, 131°.
Cauterets, 131°.
Borcette, 140°.
Bagnères-de-Luchon, 154°.

WATERS FOR THE TABLE.

Apollinaris.
Bellthal.
Bilin.
Birresborn.
Condillac.
Evian.
Gerolstein.
Gieshübler.
Harzer.
Roisdorf.
Rosbach.
St. Galmier.
Seltzer.
Sulis.
Taunus.
Wilhelmsquelle.

SECTION A.

THERAPEUTICAL CLASSIFICATION OF REMEDIES.

COMPILED FROM VARIOUS AUTHORS, THE ARRANGEMENT BEING TAKEN FROM THE DICTIONARY OF MATERIA MEDICA, BY DR. WAHLTUCH.

AGENTS OF DEFINITE OPERATION.

Alteratives.—Medicines which gradually change and correct a morbid condition of the organs. They are given in moderate doses.

Those of *Antimony* are, Antimonii Oxidum, A. Sulphuratum.
Arsenic—Liquor Arsenicalis, Liquor Sodæ Arseniatis, Liquor Arsenici Hydrochloricus.
Chlorine—Acidum Nitrohydrochloricum Dil., Ammon. Chloridum, Chlori Liquor, Potassæ Chloras, Liquor Sodæ Chloratæ, Zinci Chloridum.
Iodine—Iodum, Ferri Iodidum, Potassii Iodidum, Sulphur Iodidum.
Mercury—Hydrarg. c. Cretâ, Pilula Hydrarg., Hydrarg. Subchloridum, Hydrarg. Iodidum.
Sulphur—Sulphur Sublimatum, Sulphur Præcipitatum.
Vegetable—Dulcamara, Guaiacum, Mezereum, Sarsaparilla, Taraxacum.
Eclectics—Corydalin, syphilitic; Iridin, renal; Leptandrin, hepatic; Phytolaccin, scorbutic; Podophyllin, Rumicin, Sanguinarin.
Mineral Waters—Adelheidsquelle, Carlsbad, Ems, Friedrichshall.

Anæsthetics.—Substances which, when inhaled in vapour, have the property of suspending consciousness, and at the same time causing insensibility to pain: Æther, Chloroform, Carbon Tetrachloride, Bichloride of Methylene, Cocainæ Hydrochloras (local), Nitrite of Amyl, Nitrous Oxide Gas.

Anodynes.—Medicines which act upon the brain, alleviating pain: Aconitum, Amyl Nitris, Atropia, Belladonna, Camphor, Cannabis Indica, Conium, Gelsemin, Lupulus, Hyoscyamus, Morphia, Opium, Spiritus Ætheris, Stramonium.

Antacids.—Agents which correct acidity, and render the blood and secretions more fluid; useful in Gout, Rheumatism, etc.: Ammonia, Amm. Acet. Liquor, Ammon. Spirit. Aromatic., A. Carbonas, Calcis Liquor, C. Carbonas, C. Saccharatus Liquor, Creta Preparata, Decoct. Aloes Comp., Lithiæ Aq. Efferv., L. Carbonas, L. Citras, Magnesia, M. Carbonas, Potassæ Liquor, P. Bicarbonas, P. Carbonas, Sapo Durus, Sodæ Bicarbonas, S. Liquor, S. Liquor Efferv., Sodæ Carb.

Mineral Waters—Contrexville, Ems, Fachingen, Tarasp, Vichy.

Antalkalines.—Medicines which neutralize excess of alkaline matter in the alimentary canal and urinary organs: Acid. Benzoic., A. Citric., A. Phosphoric. Dilut., A. Sulphuric. Dilut., Ammon. Benz., Potass. Benz., Sodæ Benz.

Anti-Anæmics.—If Anæmia be present the salts of iron should be given; if wasting of the body, Cod Liver Oil would be beneficial: Ferri Ammon. Cit., F. Carbon. Saccharata, F. Phosph. Co. Syr. (Parrish), Ferrum Redactum, Easton's Syrup, Liq. Ferri Dialysatus, Tinct. Ferri Perchlor.

Mineral Waters—Berka, Franzensbad, Mondorf, Rippoldsau, St. Moritz, Spa.

Antemetics.—Medicines which arrest vomiting arising from disease or sea-sickness: Acid. Hydrocyanic. Dil., Acid. Phosph. Dil., Belladonna, Bismuth, Calcii Chlorid., Calcis Liq., Caryoph. Infus., Cerii Oxalas, Chloral, Chloroform Creasotum, Magnesia, Cocainæ Hydrochloras.

Anthelmintics or Vermifuges.—Medicines which destroy worms.

Ascarides or Thread Worms—Acid. Carbolic., Areca, Calcis Liquor, Enema Aloes, Enema Sodii Chloridi, Ol. Olivæ, Santoninum, Scammonium.

Round Worm—Calomel, Calcis Liquor, Jalap, Sabina.

Tape Worm—Areca, Cambogia, Cusso, Filicis Oleum, Granati Cort. Rad. Dec., Kamala, Santoninum, Tereb. Conf. et Oleum.

Anthidrotics.—Medicines which check perspiration: Acid. Acetic., A. Sulphuric. Dilut., A. Tannic., Ferri Sulphas, Ferri Mist. Comp., Hæmatoxyli Decoct., Zinci Oxidum.

Antidotes are placed under the several powerful drugs.

Antilithics.—Medicines which counteract a tendency to the formation of Calculi, or deposition of urinary sediments: Acid. Nitric. Dil., Acid. Phosph. Dilut., Lithiæ Liq. Efferv., L. Carbon., L. Citras, Magnes. Liq. Efferv., Pareiræ Rad., Potas. Bicarb., Potassæ Carb., Potassæ Liq. Efferv., Potassæ Liquor, Sapo, Sodæ Carb., Sodæ Liq. Efferv., Sodæ Citro-tart. Efferv.

Mineral Waters—Mergentheim, Neuenahr, Selters, Tchitli, Vals, Vichy, Wildungen.

Antiparasitics.—Medicines which destroy vegetable and animal parasites: Acid. Sulphurosum, Hydr. Ammoniatum, Olea Expressa et Essent., Pyrethrum Roseum, Quassia, Sulphur, Tabacum.

Antiperiodics.—Medicines which have the property of interrupting periodical attacks of disease: Arsenicalis Liquor, Beberiæ Sulph., Chloroform, Cinchonæ Extr. Liquid., Nectandræ Cort., Quiniæ Dikin. Syrup., Sodii Chloridum.

Antiseptics.—Agents which prevent the decomposition of organic structures, and destroy infection and fœtid odours: Acidum Boric., Acid. Carbolicum, A. Chromicum, A. Hydrochloricum, A. Nitric., A. Salicylic., A. Sulphurosum, Calx Chlorata, Chlori Liquor, Carbo Ligni, Cerevisiæ Ferment., Creasotum, Glycerinum, Hydrargyri Perchloridum, Sero-Sublimate Gauze, Potassa Sulphurata, Potass. Permanganas, Sodæ Chloratæ Liquor, Sodii Chloridum, Thymol, Zinci Chloridum.

Antispasmodics.—Medicines which allay irregular and inordinate muscular contraction, and prevent the recurrence of spasms: Acid. Hydrocyanici Dil., Æther, Ammonia, A. Carbonas, A. Spiritus Aromaticus, Ammoniacum, Argenti Nitras, Asafœtida, Belladonna, Cajuput. Ol., Calendula, Camphor, Cannabis Indica, Castoreum, Chloral-Hydrate, Chloroformum, Conium, Galbanum, Hyoscyamus, Lobelia, Moschus, Menth. Pip. Ol., Pil. Aloes et Asafœtidæ, Ruta, Spir. Ammon. Fœtid. Stramonium, Sumbul, Terebinthina, Valeriana and Valerianates, Zinci Oxidum, Zinci Valerianas.

Aperients.—*See* Cathartics.

Aphrodisiac.—Belladonna, Tinct. Ferri Perchlor., Phosphorus.

Aromatics.—Substances having an agreeable taste and smell, and having the property of dispelling flatus and correcting the griping from acrid medicines: Anisum, Anthemis, Aqua Anethi, A. Carui, A. Cinnamom., A. Caryophyll., A. Cardam., A. Cascarillæ, A. Coriand., A. Fœniculi, A. Menth. Pip., A. Menth. Vir., A. Pimentæ, Myristicæ Sp., Zingiber.

Astringents.—Medicines which produce contraction of the tissues and coagulation of the albuminous fluids; they are given to improve digestion and check increased secretions, mucous discharges, and hemorrhages; or applied topically to obviate relaxation and to stop bleeding.

Mineral Substances are, all the Diluted Mineral Acids, and all the Salts of the Metals; Alum, Borax, Carbolic Acid, Creasotum.

Vegetable Substances.—Acetum, Acid. Acetic. Dil., A. Gallic., A.

Tannic., Bela, Catechu, Cinnamon, Cornin, Ergota, Filix Mas, Galla, Geranin, Granati Rad. Cort., Gummi Rubr., Hæmatoxylum, Krameria, Kino, Larix, Matico, Quercus, Rheum, Rosa, Rumicin, Symphytum, Terebinthina, Ulmus, Uva Ursi, Vinca Major.

Carminatives.—Cardamom, Carui, Caryoph., Cinnamon, Coriander, Fœniculum, Juniper, Lavand., Limon. Ol., Menth. Pip. Ol., Myristica, Piper, Zingiber.

Cathartics.—Medicines which promote alvine evacuations.

Mild or Laxative.—Belladonna, Cassiæ Pulpa, Euonymin, Elaterii Pulv. Comp., Fel. Bovinum, Ficus, Glycyrrh. Pulv. Comp., Ipecac., Magnesia, M. Carbonas, Manna, Mel, Mori Succus, Nux Vomica, Olivæ Oleum, Potassæ Citras, Potassæ Sulphas, P. Tartras, P. Tart. Acida, Prunum, Rhamnus Frangula, Ricini Oleum, Sapo, Sinapis Semen, Sodæ Phosphas, S. Sulphas, S. Tartarata, Sulphur, Sulphur Præcip., Tamarindus, Taraxacum.

Actively Aperient.—Aloes Barb., A. Socot., Baptisin, Colchicum, Helleborus Niger, Iridin, Jalapa, Jalapinum, Magnes. Sulphas, Leptandrin, Podophyllin, Rheum, Senna, Sodæ Sulphas.

Drastic or Hydragogue.—Cambogia, Colocynthis, Crotonis Oleum, Elaterium, Hydrarg. Subchlor., Rhamni Syrupus, Scammonium.

Mineral Waters.—Achselmannstein, Birmenstorff, Carlsbad, Friedrichshall, Homburg, Hunyadi Janos, Kissingen, Marienbad, Pullna, Royal Hungarian Bitter Water (Buda-Pesth), Seidlitz.

Caustics.—Substances which destroy the vitality of the parts they are applied to: Acid. Acetic. Glaciale, A. Arseniosum, A. Carbolicum, A. Chromicum, A. Nitricum, A. Sulphurici Pasta, Alum. Siccatum, Antim. Chlor., Argenti Nitras, Calx, Creasotum, Cupri Sulphas, Hydr. Iod. Rubr., Hyd. Ox. Rubr., H. Perchloridum, Hydr. Nitrat. Acidus Liquor, Iodi Lin., Potassa c. Calce, Potassæ Permang., Soda Caustica, Zinci Chloridum.

Cholagogues.—Agents which cause a flow of bile into the intestines: Ammonii Chloridum, Hydrargyr. Subchlor.(?), H. Perchlorid., Podophyllin.

Mineral Waters.—Ems, Friedrichshall, Hungarian, Hunyadi Janos, Kissingen.

Demulcents.—Gum Acacia, Amygdala Dulc., Amylum, Cetaceum, Cetraria, Cydonii Semen, Ficus, Glycerinum, Glycyrrhiza, Hordeum, Lini Semen, Mel, Morrhuæ Oleum, Oleum Olivæ, Sevum, Theriaca, Tragacantha, Triticum Repens, Ulmi Cortex, Uvæ.

Deodorizers.—*See* Antiseptics.

Desiccants.—Agents which check secretion, and dry up mucous discharges from ulcers and wounds: Calcis Carbonas, Calcis Hydras, Creta Præparata, Magnesiæ Carbonas, Plumbi Acetas, P. Carbonas, Zinci Oxidum.

Diaphoretics.—Medicines which increase the exhalation of the skin and produce sweating. Employed in fresh colds, in fevers, dropsy, and some skin diseases: Ammoniæ Acetatis Liquor, Ammon. Carbonas, Ammon. Chlorid., Ammon. Phosphas, Antimonialis Pulvis, Antimon. Tartarati Vin., Antim. Sulphur., Belladonna, Buchu, Cajuputi Sp., Calendula, Colchici Vin., Camphor, Doveri Pulv., Guaiaci Ammon. Tinct., Ipecac. Pulv., Ipecac. Vin., Jaborandi, Lactuca, Lobelia, Pilocarpine, Potassæ Citras, Potass. Nitras, Sabina, Sassafras, Simaruba, Serpentaria, Ætheris Nit. Sp., Sulphur, Camphoræ Sp., Terebinth.

Disinfectants.—*See* Antiseptics.

Diuretics.—Medicines which promote the secretion of urine: Alchemilla, Ammon. Acet. Liq., Ammon. Chlorid., Ammon. Benzoas, Belladonna, Borax, Buchu, Cantharis, Caulophyllin, Colchicum, Copaiba, Copaibæ Resin., Cubeba, Digitalis Inf., Euonymin, Hemidesmi Radix, Iridin, Juniperi Oleum, Lithiæ

Efferv. L., Potassæ Efferv. L., Borax, Pareiræ Decoct., Parietaria, Physalis Alkakengi, Potassæ Acetas, P. Nitras, Potass. Tartras Acida, Potassæ Tartras, Potassæ Bicarb., Potassæ Carb., Potassæ Chloras, Potassæ Liquor, Senegæ Inf., Senecionin, Scoparius, Scillæ Acetum, Simaruba, Spirit. Ætheris Nit., Terebinthina, Ulmi Decoctum.

Mineral Waters.—Friedrichshall, Kissingen, Leuk, Shap.

Ecbolics.—Substances which promote the contraction of the uterus and facilitate the expulsion of the contents: Borax, Cinnamomum, Ergota, Sabina.

Emetics.—Medicines which excite vomiting: Alum (in repeated doses), Anthemis, Antimonium Tartaratum, Apomorphia, Baptisin, Cupri Sulphas, Ipecacuanha, Sinapis Pulvis, Sodii Chloridum, Tabacum, Veratrum Viride, Zinci Acetas, Zinci Sulphas.

Emmenagogues.—Medicines which maintain or restore a healthy condition of the menstrual discharge, and increase the quantity: Aloes Decoctum Co., Aloes Pilul. et Myrrh., Ammonii Chloridum, Borax, Calendula, Ergota with Hyoscyamus, Ferrum Redactum, Gossypii Tinctura, Ruta, Sabina, Senecionin.

Emollients.—Substances which relax the solid tissues; also such as protect sensitive surfaces, employed to allay irritation, painful ulceration in diseases of the mucous membranes of the alimentary canal: Gum Acacia, Adeps, Cera Alba, Cetaceum, Collodion, Cydonium, Hordei Dec., Glycerinum, Glycer. Amyli, Lini Decoct., Sevum, Tragacantha.

Escharotics.—*See* Caustics.

Expectorants.—Medicines which promote the secretion of bronchial mucus: Acid. Benzoicum, Ammonia, Am. Carb., Ammoniacum, Ammonii Chloridum, Antim. Tartar., Æther Asafœtida, Bals. Peruv., Bals. Tolut., Benzoin, Copaiba, Cubeba, Euonymin, Galbanum, Ipecacuanha, Lobelia, Myrrha, Scilla, Senega, Styrax Præp.

Febrifuges.—Mineral and Vegetable Acids: Alkakengi Tinct., Hydrastin, Antim. Tart., Pot. Chloras, P. Citras, P. Nitras, Sp. Salis Dulcis Quinine.

Hæmatinics.—Medicines which augment the number of red corpuscles: Ferri Carbonas Sacch., Ferri et Ammonio-citras, Ferri Chloroxydum, Ferri Phosph. Syr. (Parrish), Ferri Liq. Dialysatus, Ferrum Redactum.

Hæmostatics.—Substances which arrest hemorrhage.—*See* Styptics.

Hypnotics.—(Soporifics)—Medicines which cause sleep: Cannabis Ind., Chloral, Chloroformum, Codeia, Conium, Croton-chloral, Hyoscyamus, Lupulus, Morphia, Opium, Papaver, Paraldehyde, Urethane, Hypnone, Sumbul, Morphiæ Bimeconatis Liquor.

Irritants.—Substances which stimulate and cause irritation or inflammation of the parts they are applied to: Acidum Aceticum Glaciale, Acetum Cantharid., Antim. Tart., Cataplasm. Sinapis, Charta Epispastica, Charta Sinapis, Empl. Calefaciens, E. Cantharid., E. Picis, Hydr. Iod. Rubr., Hydrarg. Oxid. Rub., Hydr. Perchloridum, Lin. Ammoniæ, Lin. Camph. Co., Lin. Iodi, Lin. Sinap. Co., Lin. Terebinth., Potassa Sulphurata.

Laxatives.—*See* Cathartics.

Narcotics.—Medicines which cause stupor or sleep, allay pain, arrest inordinate secretion, and subdue irritation: Æther, Belladonna, Chloroformum, Conium, Creasote, Dulcamara, Ext. Cannab. Ind., Hyoscyami Ext., Lactuca, Lupulus, Morphia, Nitrite of Amyl, Opium, Potassa Sulphurata, Stramonium, Tabacum.

Nutritives.—Substances which quicken assimilation and improve the composition of the living tissues: Gum Acacia, Amygdala, Bynes Extractum, Carnis Extract., Cetrariæ Decoctum, Ficus, Glycerinum, Lac, Manna, Morrhuæ Ol., Olivæ Oleum, Ovi Vitellus, Prunum, Sacch. Lactis, Sevum, Sp. Vini Gallici Mist., Theriaca, Uvæ.

Purgatives.—*See* Cathartics.

Refrigerants.—Medicines which diminish heat and quench thirst: Aqua, Acidum Aceticum, A. Citricum, A. Hydrochlor., A. Tartaricum, A Phosp. Dilut., A. Sulph. Dil., Ammon. Acet. Liquor, Aurantii Succus, Borax, Limonis Succus, Mori Syrup., Oxymel, Potas. Citras, P. Chloras, P. Nitras, P. Tart. Acida, Æther. Nitr. Sp., Æther. Muriatici Sp., Prunum, Tamarindus.

Restoratives.—*See* Tonics.

Rubefacients.—Agents which, when applied to the skin, irritate and redden it: Ammoniæ Liquor, Acet. Cantharid., Lin. Camphoræ Co., Lin. Capsici, Lin. Crotonis, Lin. Sinapis Co., Oleum Limonis, Ol. Rosmarini, Ol. Rutæ, Ol. Succini, Ol. Terebinth.

Sedatives.—Medicines which depress the action of the heart and of the vascular system, given in palpitation of the heart, hypertrophia cordis, and acute inflammatory diseases.

Arterial.—Acidum Hydrocyanicum, Aqua Laurocerasi, Digitalis, Plumbi Acetas, Tabacum, Veratrum Viride.

Spinal.—Ammonii Bromidum, Physostigmata, Potassæ Nitras, Potassii Bromidum.

Soothing.—Medicines which directly depress the energy of the nervous and vascular system, without causing any previous excitement, used in irritable cough, neuralgic pain, spasmodic affections, and great excitability: Aconitum, Atropia, Belladonna, Camphor, Cerii Oxalas, Chloroform, Colchicum, Conium, Hyoscyamus, Lactuca, Morphia, Morphiæ Bimeconat. Liq., Opium, Papaver.

Stomachic.—Acid. Carbolic., A. Hydrocyanic., Argenti Nitras, Bismuth. Carb., Cerii Oxalas, Creasotum, Potass. Bicarb., Zinci Oxidum.

Sialogogues.—Medicines that increase the secretion of the saliva when chewed, used in affections of the face and head, toothache, and in paralysis of the tongue: Armoracia, Mastic, Mezereum, Nicotiana, Piper, Pyrethrum, Sinapis, Zingiber.

Soporifics.—*See* Anodynes.

Stimulants.—Medicines which increase the sensibility of the nervous and muscular system, and the secretions of the mucous membranes, and give energy to the whole system.

Hepatic.—Acid. Benzoic., Acid. Nitrohydrochloric., Aloes, Ammon. Benz., Ammon. Phosp., Hydr. Perchlor., Ipecac., Ol. Croton., Rheum, Senna, Sodæ Benzoas, Sodæ Salicyl., Sodii Chlorid., Taraxacum.

Intestinal.—Ammon. Chlorid., Calomel, Magnes. Sulph., Manganes. Sulph., Menispermin, Ol. Ricini.

Both Hepatic and Intestinal.—Baptisin, Colchicum, Colocynth, Euonymin, Hydrastin, Iridin, Jalap, Juglandin, Leptandrin, Phytolaccin, Podophyllin, Potass. Sulph., Sanguinarin, Scammonia, Sodæ Tartar., Sodæ Sulph.

Spinal.—Acid. Benzoic., Æther, Arnica, Cannabis Ind., Cantharis, Ergota, Nux Vomica, Oleum Cajuputi, Phosphorus, Strychnine.

Stomachic.—Ammon. Carbon., Ammoniacum, Ammoniæ Liquor, Armoracia, Asafœtida, Benzoin, Capsicum, Chloroform, Cardamomum, Caryoph., Cinnamomum, Coriandrum, Fœniculum, Macis, Mastic, Piper, Potassæ Chloras, Sinapis, Sodii Chlorid., Sp. Ammon. Fœtid., Sp. Vini Gallici, Valerian. Tinct. Ammon., Zingiber, and most essential oils.

Mineral Waters.—Alexandersbad, Baréges, Cauterets, Kreuznach, St. Moritz.

Stimulants (*external*).—Cajuputi Ol., Charta Sinapis, Lin. Ammon., Camph. Comp., Lin. Capsici, Lin. Chloroformi, Lin. Crotonis, Lin. Sa Lin. Sinapis Co., Lin. Terebinthinæ, and most essential oils.

Stomachics.—Medicines which directly promote the functions of the st and improve the appetite and digestion: Acid. Nitrohydrochlor. Dil., A mis, Aurantium, Buchu, Calumba, Capsicum, Cardamomum, Caryoph Cascarilla, Chirata, Cinchona, Cinnamomum, Cusparia, Gentiana, Gu Lavandula, Limon, Lupulus, Mentha Piperita, Nux Vomica, Pimenta, Qu Quinia, Rheum.

Styptics.—Remedies which arrest bleeding, used in hemorrhage fro nose, gums, vagina, and rectum: Acid. Gallicum, A. Tannicum, Alumen, zoin, Cinchona Pulvis, Creasote, Cupri Sulphas, Ergota, Ferri Perchlor., Persulph. Liquor, Granati Rad. Cort., Gummi Rubri Extractum Liqu Kino, Matico, Spir. Rectificatus, Zinci Sulph.

Sudorifics.—*See* Diaphoretics.

Tonics.—*Stomachic* are those which improve the functions of the dig organs, and thus give strength to the system generally: Acid. Hydr Dil., A. Nitric. Dil., A. Nitrohydrochlor. Dil., A. Phosph. Dil., A. Sulph Aurant. Cort., Anthemis, Balsam. Peruvian., Beberiæ Sulphas, Buchu, Ca Cascarilla, Chiretta, Cinchona, Decoct. Aloes Comp., Gentiana, Gu Lupulus, Nux Vomica, Pareira, Quassia, Quiniæ Sulph., Salicin, Serpe Simaruba, Strychnine.

Nervine.—Acid. Arseniosum, Argenti Nitras, Argenti Oxidum Oxalas, Cupri Sulphas, Cusparia, Strychnia, Zinci Acetas, Sulph.

Acting through the blood, and improving its quality.—Ferri Car charata, F. Ammonio-Citras, F. Citras et Quiniæ, F. Chloro F. Iodidum, F. Liquor Dialysat., F. Oxid. Magnet., F. Pe F. Pernit. Liquor, F. Phosphas, F. Phosph. Co. Syrup (Pa F. Redactum, Morrhuæ Oleum, Sarsæ Radix.

Mineral Waters.—Adelheidsquelle, Alet, Altwasser, Auteuil, Bocklet, Gastein, Kreuznach, Meinberg, Orezza, Ottilien Pyrmont, St. Moritz, Spa, Schwalbach, Wildungen.

Eclectic Tonics.—Cornin (stimulant astringent), Hydrastin and spermin (dyspeptic), Cimicifugin and Scutellarin (Nervine sedative).

Vermifuges.—*See* Anthelmintics.

Vesicant.—Cantharis Charta or Liquor Epispasticus.

SECTION B.

REMEDIES EMPLOYED IN SPECIAL AILMENTS.

THE FOLLOWING ARE A FEW DISEASES SELECTED FROM DRS. WARING, NELIGAN, AND OTHERS; THEY MAY SERVE IN SOME MEASURE TO REFRESH THE MEMORY WHEN NECESSARY; BUT FOR A FULLER LIST THE READER IS REFERRED TO THOSE WORKS ON MATERIA MEDICA.

Abdominal Plethora. Fucus Vesiculosus. *Mineral Waters:* Franzensbad, Homburg, Marienbad, Tarasp.
Abscesses. Large. Chlori Liquor.
——— *Chronic.* Sarsæ Radix.
Acne Indurata. Blisters, Creasotum, Hydr. Ammon., Sulphur. Iodidum.
—— *Punctata.* Arsenic, Pix Liquida, Zinci Sulphas, Sulph. Iodid. Ung.
—— *Rosaceæ.* Arsenic., Amygdal. Mist., Creasotum, Hydrarg. Iodidum Viride, Potassæ Liq., Sulphur.
—— *Simplex.* Ammonii Chloridum, Acid. Hydrocyanic., Borax, Collodion, Ol. Morrhuæ, Potassa Sulphurata, Potassæ Liquor, Sulphur.
—— *Syphilitica.* Hydr. Iodid. Rubr., Hydr. Sulphuratum.
Adder Bite. Ammon. Liquor.
Ague. Acid. Arsen., Camphor, Ipecacuanha, Quinia, Salicin.
Albuminuria. Acid. Gallicum, Ergota, Ferri Perchlor. Tinct., Senegæ Rad.
Alimentary Canal, Debility of. Nux Vomica.
Alteratives.—Section A.
Amenorrhœa. Aloes, Ergota, Ferri Phosphas, Ferrum Redactum, Mistura Ferri Co., Myrrha, Potass. Permang. and Apiol Capsules, Rutæ Oleum.
Anæmia.—See *Anti-anæmics.*
Anæsthetics.—Section A.
Anasarca. Digitalis, Elaterium, Potass. Acet., Juniperi Sp., Scilla.
Angina Pectoris. Argenti Nitras, Amyl Nitris, Acid. Hydrocyanic., Belladonna, Nitro-glycerine, Zinc. Sulph.
Anodynes.—Section A.
Antacids.—Section A.
Antalkalines.—Section A.
Antaphrodisiac. Camphora, Potassii Bromid.
Antemetics.—Section A.
Anthelmintics.—Section A.
Anthidrotics.—Section A.
Anti-Anæmics.—Section A.
Antidotes.—Section A.
Antilithics—Section A.
Antiparasitics.—Section A.
Antiperiodics.—Section A.
Antipyretics.—Section A.
Antiseptics.—Section A.
Antispasmodics.—Section A.
Aperients.—Section A.
Aphrodisiac.—Section A.
Aphonia. Armoraciæ Rad., Pyrethrum.
Aphthous Ulcerations of Mouth. Argenti Nitras, Borax, Confect. Rosæ Gall., Myrrha, Potass. Chlor., Quinia.
Apoplexy. Aloes, Croton. Ol., Terebinth. Enema, Hydrarg. Subchlor.
Appetite, to promote. Acid. Sulph. Dil., Tinct. Chiretta. *Mineral Water:* Apollinaris.
Aromatics.—Section A.
Ascarides.—See *Anthelmintics.*
Asthma. Acid. Hydrocyanic. Dil., Ammon. Fœtid. Spirit., Ammoniacum, Amyl Nitris, Belladonna, Camphor, Cannab. Ind., Chloral, Chloroformum, Charta Nitrata, Balsam. Peruvian., Grindelia Robusta, Lobelia, Myrrha, Potass. Bromid., Stramonium, Tabaci Fol.
Astringents.—Section A.

Baldness. Bals. Peruv., Crinale Linimentum, Crotonis Lin., Rosmarini Infus.
Barrenness. *Mineral Water:* Ems.
Bed Sores. Argenti Nitras, Acid. Sulphuros., Amadou, Balsam Peruv. Collodion, Zinci Oxid. Ung.
Bile, deficiency of. Aloes Socot., Fel Bovinum. *See Stimulants.*
Biliary Calculi. Sapo, Sodæ Bicarb.

Bites of fleas, to prevent. Lavand. Ol., Pyrethrum Roseum, Camphora.
Bilious Vomiting, } Acid. Phosp. Dil.
,, *Diarrhœa,* }
Bladder, irritable. Belladonna, Buchu, Camphora, Triticum Repens, Uvæ Ursi, Hyoscyamus, Matico, Acid. Carbolic., Pareiræ Extr. Liq. *Mineral Waters:* Fachingen, Malvern, Pougues, Langenbrücken, Luhatschowitz.
Bladder, Catarrh of the.—See *Catarrhus Vesicæ.*
Bladder, distension of. Camphor.
,, *inflammation of.* Acid. Benzoic.
Blennorrhœa.—See *Gonorrhœa.*
Blister, to heal. Ung. Galban. Co.
,, *to keep open.* Ung. Canthar., Ung. Sabinæ.
Blood restorers.—See *Tonics.*
Boils. Cerevisiæ Ferment., Farina Tritici, Mel, Ficus, Ferrum.
Bones, Fracture of. Symphytum, Calcii Phosphas.
Bowels, Torpidity of.—See *Cathartics.*
——— *distended.* Aloes Socot.
——— *Inflammation and Irritation of.* Ricini Oleum.
Brain, excited. Potass. Bromid.
—— *Inflammation of.*—See *Meningitis.*
Breath, Fœtor of. Acid. Carbolic., Glycerin. Acid. Carbolic., Carbo Ligni, Potass. Chloras, Pepsine.
Bronchitis. Acid. Sulphuros. Spray, Ammoniacum, Ammon. Carb., Ammon. Chloridum, Antim. Tart., Asafœtida, Copaiba, Cubeba, Chloral, Galbanum, Iodum, Larix, Lobelia, Pix Liquid., Plumb. Acet., Scilla, Terebinth. Confectio. *Mineral Waters:* Kronthal, Labassère, Landeck, Langenbrücken, Lippspringe, Luhatschowitz, Neuenahr.
——— *Chronic.* Iodi Vapor, Camphor. et Lac, Asafœtida, Copaiba, Ipecac., Lobelia, Senega, Serpentaria, Tar Water, Terebene.
Bronchocele. Hyd. Iod. Rub. Ung., Iodum, Potass. Bromid.
Brow Ague. Quiniæ Sulph.
Bruises. Acetum, Acid. Acetic. Dil., Alum, Arnica, Plumb. Subacet. Dil. Liq., Saponis Linim., Sodii Chlorid., Sp. Vini Rect., Ammon. Chlorid. Lotio.
Buboes. Chlori Liquor, Hydr. Ung., Iodum.
Bunions. Amadou Plaster.
Burns and Scalds. Acid. Carbolic. c. Oleo, Acid. Sulphuros., Acid. Tannic. c. Oleo, Argenti Nitras, Calcis Lin., Calcis Carbonas, common Chalk, Calcis Chlor. Liquor, Carron Oil, Collodion, Creasotum, Creta Præpar., Gossypium, Lini Oleum, Olivæ Oleum, Sp. Vini Rect., Terebinth. Oleum.
Bursæ. Ammon. Chlorid.

Calculus, Renal, passage of. Alchemilla, Opium, Triticum Repens.
Calculi, Lithic Acid. Ammon. Phosph., Borax, Calcis Liq., Lithiæ Carb., Potassæ Carb., Sodæ Carb., Sodæ Sulphas.
——— *Oxalate Lime.* Lini Semen.
——— *Phosphatic.* Acid. Nitric. Dil., Pareiræ Extr. Liquid.
Cancer. Acid. Sulph. (Nordhausen), Arsenical Paste, Acid. Arsen., Acid. Sulphuros., Acid. Tannic., Bromum, Chloral, Antim. Chlorid., Conium, Ferri Arsenias, Hyd. Nit. Acid. Liq., Iodoform, Potass. Permanganas, Zinci Chlorid., Ung. Stramonii.
——— *of the Uterus.* Bromine.
Carbuncles. Acid. Carbolicum, Cerevisiæ Fermentum, Hyd. Co. Ung., Potassii Bromidum, Ung. Galban. Co.
Carcinoma. Aconitum.
Cardialgia or Heartburn. Bismuth. Subnitras, Pulv. Doveri.
Carious Tooth. Arsenical Paste.
Carminatives.—Section A.
Catarrh. Ammoniacum, Bals. Peruv., Dulcamara, Sp. Ammon. Fœtid., Cetraria, Glycyrrhiza, Amygdala Dulc., Lini Semen, Lobelia, Sp. Æth. Nit., Lichen Island., Cinchon. Cortex, Quiniæ Sulph., Matico, Myrrha, Pix Liquid., Senega.
Catarrhus Vesicæ. Ammoniæ Benzoas, Potassæ Chloras, Buchu, Uva Ursi, Triticum Repens, Maticæ Tinct. *Mineral Waters:* Langenbrücken, Pougues.
Chalk Stones in Gout. Ammoniæ Benzoas.
Cathartics.—Section A.
Caustics.—Section A.
Chancres. Acid. Nitric., Argent. Nitr., Iodoform, Hydrarg. Nigra Lotio, Hydr. Nitrat. Liq. Acid., Hydr. Ox. Rubr.
Chaps. Cerat. Camphor., Glycerini Ung.
Chilblains. Alum Poultice, Argenti Nitras, Boracis Ung., Calc. Chlor. Liq., Capsici Liniment., Creasotum, Glycerinum.
Chlorosis. Ferri Chlorox. Liq., Ferri Perchlor. Tinct., Ferri Redactum, Myrrha, Nickel Sulphas. *Mineral*

Waters: Contrexville, Franzensbad, Rippoldsau.

Cholagogues.—Section A.

Cholera. Camphor, Capsicum, Creasotum, Pulv. Salinus Dr. Stevens, Argenti Nitras, Sodii Chlorid., Sumbul, Board of Health Cholera Mixture.

——— *Infantium.* Menth. Pip. Ol., Creasote, Rheum, Hydr. Subchlor., Ol. Ricini.

Chordee. Belladonna, Camphor, Lupulinum, Opium, Potassii Bromid.

Chorea. Argenti Nitras, Arsenic. Liquor, Cerii Oxalas, Chloral, Cimicifugin, Conium, Hyoscyamus, Cupri Sulphas, Ferrum Redactum, Liq. Arsen. Chloridi (Lond. Pharm.), Morrhuæ Ol., Nux Vomica, Physostigmatis, Ruta, Valeriana, Zinci Sulphas, Z. Valerianas.

Cold in the Head. Acid. Tannic.

Colic. Cajuputi Oleum, Guarana, Lavand. Oleum, Magnes. Sulph., Menth. Pip. Ol., Opium, Ricini Oleum, Rutæ Ol.

——— *Flatulent.* Carui.

Conjunctiva, Inflammation of. Opii Vinum.

Constipation. Aloes Decoct. Co., Alum, Cambogia, Cassiæ Pulp., Colocynth. Pulv., Croton Ol., Elaterii Pulv. Co., Ficus, Glycyrrh. Pulv. Co., Iridin, Lactuca, Magnesia, Magnesiæ Sulph., Manna, Mel, Mori Succus, Nux Vomica, Olivæ Ol., Ricini Ol., Rheum, Sapo Castil., Scammonium, Senna, Sinapis Semen, Soda Tartarata, Sodæ Phosphas, Sulphur, Tabaci Enema. *Mineral Waters:* Carlsbad, Carlsbad Salt, Friedrichshall, Ofen, Pullna.

Constipation of Infants. Cassiæ Pulp., Glycyrrh. Pulv. Co., Rhei Pulv. Co., Ricini Oleum, Scammon. Pulv. Co., Sennæ Syrupus.

———— *Habitual.* Belladonna.

———— *Obstinate.* Cambogia, Colocynthis, Croton. Ol., Tabaci Enema, Podophyllin.

Consumption. Calc. Hypophosph., Camph. Co. Tinct., Ferri Phosp. Co. Syrup., Morrhuæ Ol., Sacchar. Lactis.

Convalescence after Debilitating Disease. Acid. Sulph. Dil., Calumba, Cascarilla, Chirata, Cusparia, Quassia.

Convulsions. Ammon. Fœtid. Sp., Belladonna, Chloroform, Opium, Rutæ Oleum, Enema Terebinth.

Cordial. Cardamoms.

Corns. Acid. Aceticum Glaciale, Ammon. Chlorid., Argent. Nitras, Plumbi c. Sapone Emp.

Coryza. Acid. Tannic., Sodii Chlorid., Zinci Oxidum.

Cough. Acid. Sulph. Dil., Antim. Vinum, Gum Acacia, Amygd. Amara, Cetaceum, Codeiæ Syr. and Pastilles, Conium, Copaiba, Cubeba, Glycyrrhiza, Ipecacuanha, Lini Semen, Lobelia, Morphiæ Troch., Scilla, Styrax Præp.

Cough, Chronic. Benzoin. Co. Tinct.

——— *Convulsive.* Belladonna, Cannabis Indica, Stramonium.

——— *Spasmodic.* Acid. Hydrocy. Dil., Tinct. Camph. Comp.

——— *Tickling.* Acaciæ Gum., Acid. Phosph. Dil., Morphia, Cannab. Ind. Tinct.

Cramp. Cannab. Indica.

Croup. Cubebæ Oleum, Emetics, Antim. Tart., Cupri Sulph., Ipecac., Lobelia. Externally, Camph. Linim. Co.

Cutaneous Diseases. Acid. Arsen., Amylum, Antim. Sulphurata, Buchu. *Mineral Waters:* Achselmannstein (Aix-les-Bains, Eczema), Aix-la-Chapelle, Bagnères-de-Luchon, Baréges, Bourboule, Cauterets, Croft, Gilsland, Ischia, Krankenheil, Kreuznach, Leuk, Lucca, Nenndorf, Plombières, Schinznach, Schlangenbad, Strathpeffer, Tarasp, Vals, Vernet, Weilbach.

Deafness. Glycerinum, Fel Bovinum

Debility. Calcis Hypophosphis, Cinch. Cortex, Ferrum, Quin. Sulph., Sp. Vini Rect. *Mineral Waters:* Berka, Orezza, Schlangenbad, St. Moritz, Spa.

———— *of Lungs and Stomach.* Cetraria.

———— *Scrofulous.* Quiniæ Sulph. Quiniæ Dikinatis Syr.

Debility of Digestive Organs. Acid Sulph. Dil., Boldo, Cetraria, Calumba, Caryophyllum, Ferri Phosphas. Syrup. Co., Gentiana, Ignatia Amara, Morrhuæ Ol., Nux Vomica Tinct., Pepsine, Potass. Ferrocyanid., Rhei Infus., Strychniæ Liquor. *Mineral Waters:* Alet, Apollinaris, Orezza, Spa, Schwalbach.

Delirium Tremens. Ammoniæ Liquor, Chloral Hydras, Digitalis, Sumbul.

Demulcents.—Section A.

Depilatory. Calx Sulphurata.

Desiccants.—Section A.

Diabetes. Acid. Phosphor. Dil., Jordan Almond Cakes, Creasotum, Codeia, Ferri Perchlor. Tinct., Ferri Phosphas, Potass. Permanganas, Uva Ursi. *Mineral Waters:* Carlsbad, Vichy.

Diaphoretics.—Section A.

Diarrhœa. Acid. Carbolicum, Acid. Phosph. Dil., Acid. Tannic., Acid. Sulph. Dil., Belæ Fructus, Bismuthi Subnitras, Calcis Aqua, Calcis Carbolas, Calcis Carbon. Sacch., Calcis Liquor, Camphora, Capsicum, Catechu, Creta Præp., Doveri Pulv., Geranin, Granati Cort., Guarana, Gummi Rubrum, Hæmatoxylum, Kino, Krameria, Opium, Plumbi Acetas, Quiniæ Sulph., Rhei Tinct., Ricini Oleum, Serpentaria, Simaruba, Sodii Chlorid., Dr. Stevens's Pulvis Salinus, Sumbul.

——— *Chronic.* Cascarilla, Cetaceum, Cetraria, Cupri Sulph., Cinchona, Ferri Pernit. Liquor, Hæmatoxylum, Plumbi Acetas, Quiniæ Sulph., Simaruba.

Digestive Organs, Debility of.—See *Debility.*

Disinfectants.—Section A.

Diphtheria. Acid. Carbolic., Acid. Hydrochlor., A. Lacticum, Acid. Sulphuros., Argenti Nitras, Ferri Perchlor. Liq. fort., Glycerin, Potas. Chloras, Potas. Permanganas, Iodi Tinct.

Diuretics.—Section A.

Dropsy. Ammon. Benzoas, Ammon. Chlorid., Buchu, Cajuputi Ol., Cambogia, Colchicum, Croton. Ol., Elaterium, Iodum, Jalapa, Junip. Oleum, Lactuca, Nux Vomica, Parietaria, Potass. Acet., Potass. Iodidum, Potass. Tart. Acid., Rhamni Succus, Scoparius, Sodæ Bicarb., Æth. Nit. Sp.

——— *Hepatic.* Ammon. Chlor., Hydrarg. Subchlor., Taraxacum.

——— *Inflammatory.* Limonis Succus.

——— *Portal.* Ammonii Chloridum.

Dypsomania. Capsicum.

Dysentery. Acid. Tannic., Belæ Extract. Liquid., Cascarillæ Inf., Cupri Sulph., Cuspariæ Inf., Doveri Pulv., Geranin, Guarana, Gummi Rubrum, Hæmatoxylum, Ipecacuanha, Lini Decoct., Plumb. Acet., Ricini Oleum, Sodæ Chlorin. Liq., Sumbul.

Dysentery, Chronic. Cetraria, Cusparia, Hæmatoxylum, Plumbi Acet., Plumbi Pil. c. Opio, Rheum, Simaruba, Uva Ursi.

Dyspnœa. Æther, Croton - Chloral Hydrat., Lobelia.

Dysmenorrhœa. Ammon. Acetat. Liquor, Borax, Senega, Bromides.

Dyspepsia. Aloes, Acid. Hydrocy. Dil., Ammon. Liquor, Bismuth. Carb., Bismuth. Subnitras, Buchu, Calcis Liq., Calumba, Capsici Tinct., Carbo Ligni, Cascarillæ Inf., Cetraria, Æther, Ferrum, Ferri Phosph., Geranin, Hæmatoxylum, Limon, Magnesia, Menispermin, Nux Vomica Ext., Pepsine, Potass. Liquor, Pot. Bicarb., Pot. Sulph., Quassia, Rheum, Salicinum, Sapo Durus, Senna, Serpentaria, Sodæ Liq., Sodæ Bicarb., Sodæ Carb., Sodæ Chlorin. Liq., Zingiber. *Mineral Waters:* Alet, Apollinaris, Charlottenbrunnen, Dinsdale, Ems, Gilsland, Homburg, Orezza, Vals.

Dyspepsia, Atonic. Acid. Sulph. Dil., Anthem. Inf., Armoracia, Calumba, Camphor, Capsicum, Catechu, Potas. Ferrocyan., Gentiana, Hæmatoxylum, Pepsine, Pip. Nig.

———— *Irritative.* Bismuth. Subnitras, Cerii Oxalas.

———— *Chronic.* Aloes, Morrhuæ Ol., Pepsine.

Ecbolics.—Section A.

Eczema. Acid. Carbolic., Acid. Salicylic., Creasoti Ung., Glycerinum, Hydr. Ammon., Sodæ Arsenias, Vaselin. Plumbi Subacetatis. *Mineral Waters:* Aix-les-Bains.

——— *Chronic.* Ferri Arsenias, Ol. Betulæ Alb.

Elephantiasis. Ferri Arsenias.

Emetics.—Section A.

Emmenagogues.—Section A.

Emollients.—Section A.

Enteritis. Ricini Oleum.

Epidermis, to dissolve. Borax.

Epilepsy. Ammon. Bromid., Argenti Nitras, Castoreum, Cerii Oxalas, Cupri Sulphas, Potass. Bromid., Quiniæ Sulphas, Strychnia, Zinci Sulph., Zinci Valerianas, Valeriana.

Eructations, Fœtid. Carbo Ligni, Acid. Carbolic., Pepsine.

Eruptions attended with itching. Acid. Carbolic.

Eruptions, Chronic. Cerii Oxalas, Potassa Sulphurata.

——— *Scrofulous and Venereal.* Hyd. Iodid. Viride.

Eruptions, Pustular, to produce. Croton. Oleum, Antim. Tartarata.

Erysipelas. Amyli Glycer., Amylum, Cinchona, Collodion, Creasotum, Creta, Lycopodium, Quinia, Sp. Vini Rect.

Erythema. Sp. Vini Rect.

Escharotics.—Section A.

Evacuations, Fœtid. Potas. Permangan., Sodæ Chlor. Liq.

Excitement, Nervous, to quiet. Moschus, Sumbul, Potassii Bromidum.

Excoriations. Alum, Amylum, Boracis Glycerinum, Fuller's Earth, Glycerini Ung., Plumbi Carb., Zinci Oxid.

Expectorants.—Section A.

Expectoration, Fœtid. Acid. Carbolic., Potass. Permanganas, Chlorinum.

——— *to diminish.* Aconitum, Cetraria, Larix, Quinia.

Eyes, application for the. Boric Acid Lotion, Vapor Acid. Hydrocyan., Chloroformi Vapor, Lapis Divinus, Cydon. Decoct., Hyd. Iod. Rub. Ung., Hyd. Nitrat. Ung., Opii Vinum.

—— *to contract pupil of.* Physostigmat. Faba, Pilocarpia.

—— *to enlarge pupil of.* Belladonna, Atropia, Daturina.

—— *purulent discharge from.* Alum, Astringent Lotion Gum. Rub.

Face Lotion. Benzoin, Hydr. Perchloridum c. Amygdal. Mist.

Fainting. Æther.

Febrifuges.—Section A.

Feet, perspiring. Acid. Carbolic., Potas. Permanganas, Zinci Oxid. Ung.

Fever. Acid. Carbolic., Acid. Nitric., Ammon. Acetat. Liquor, Ammon. Citras, Æther. Muriat. Sp., Antipyrin, Kairin; Potassæ Chloras, Potassæ Citras, Potass. Tart. Acid.

—— *hay.* Camphora. Cannab. Ind., Lobelia Inflata, Nux Vomica, Quinia.

—— *bilious.* Cuspariæ Cortex.

—— *intermittent.* Arsenicalis Liquor, Capsici Tinct., Cascarilla, Cinchona, Cinchonidine, Cinchonine, Cuspar. Cort., Nectandra, Kino, Quassia, Quinia, Santoninum.

——— ——— *of drunkards.* Piper Nigrum.

—— *low.* Calendula, Castor.

—— *puerperal.* Ammonia, Menth. Pip. Ol., Opium.

—— *remittent.* Cinchona, Beberiæ Sulph., Nectandra, Quiniæ Sulph.

—— *scarlet.* Castorei Tinct., Capsici Tinct., Chloral.

—— *typhoid.* Acid. Nitr. Dil., Ammon. Liq., Amyli Enema, Argent. Nitr., Cerevisiæ Ferment., Chlori Liq., Cusparia, Serpentaria, Sumbul Tinct., Belladonna.

Flatulence. Æther, Aloes, Anethum, Anisum, Asafœtida, Capsicum, Carbo Ligni, Caryophyllum, Lavand. Oleum, Menthæ Pip. Ol., Menthæ Virid. Ol., Piper Nigrum, Zingiber.

Flatulent Colic. Cajuputi Ol., Carui Fructus.

Flatulence, hysteric. Asafœtidæ Tinct.

——— *infantile.* Fœniculi Infusum.

Fleas, to keep away. Camphora, Pyrethrum Roseum.

Flooding. Ergota, Vincæ Major. Ext.

Flies and gnats, to keep away. Rutæ Ol., Tereb. Ol.

Freckles. Calcis Lin.

Fœtor of breath. Acid. Carbolic., Glycerin. Acid. Carbolic.

Fungous Flesh. Alumen Exsiccatum, Cupri Sulphas.

Gall Stones. Sapo Durus.

Gangrene. Baptisin.

——— *senile.* Chloroformum.

Gargle, astringent. Acetum, Alum, Gummi Rubrum, Krameria, Rosæ Inf. Acid.

——— *for Putrescence.* Acid. Carbolic. Potass. Permangan., Sodæ Chlorinat. Liq.

Gastralgia. Æther, Argenti Nitras, Manganesii Oxid. Nig., Pepsine. *Mineral Water:* Contrexville.

Gastric Irritation. Bismuth. Ammonio-Citras, Potass. Acetas.

Gastrodynia. Acid. Hydrocy. Dil., Aconitum, Calumba, Cerii Oxalas, Manganesii Oxid. Nig., Stramonium.

Generative Organs, loss of tone. Belladonna, Nux Vomica, Phosphorus.

——— ——— *sedative of.* Potass. et Ammon. Bromid.

Glands, scrofulous. Fucus Vesiculosus, Iodum, Ol. Morrhuæ.

——— *indurated.* Cadmii Iodid., Potass. Iodidum, Potass. Iodid. Linim.

Glandular diseases. Calcii Chlorid. Siccum, Sodæ Bicarb.

——— *enlargements.* Ammon. Chlorid., Croton. Oleum, Ammoniaci c. Hydrarg. Emp., Hydrarg. c. Ammoniæ Mur. Ung., Morrhuæ Oleum, Iodi Linim., Sodæ Chloratæ Liquor. *Mineral Waters:* Kœnigsdorff, Leuk, Marienbad.

Gleet. Bals. Peruvianum, Cantharis, Copaiba, Creasotum, Ergot, Ferri Perchlor. Liquor, Galla, Piper Nigrum, Zinc. Acet.

Gonorrhœa. Acid. Tannic., Bals. Canadensis, Copaiba, Creasotum, Cubeba, Hyd. Nit. Acid. Liq., Hyd. Subchlor., Plumbi Acetas, Potass. Bicarb., Potass. Permang., Santal Flav. Ol., Styrax Præparata, Zinci Acetas, Z. Sulph., Z. Chlorid., Z. Sulphocarbolas.

——— *Chronic.* Acid. Tannic.

Injectio, Alum, Cannab. Indic. Cubebæ Tinct.

Gout. Ammoniæ Benzoas, Ammoniæ Phosphas, Cajuputi Ol., Colchicum, Crotonis Oleum, Hyoscyamus, Lithiæ Carbonas, Lithiæ Citras, Lithiæ Guaiacas, Magnesia, Potass. Citras, Sabina, Sodæ Carbonas, Sodii Taurocholas, Veratrum Viride. *Mineral Waters:* Adelheidsquelle, Aix-les-Bains, Baden-Baden, Buxton, Carlsbad, Eilsen, Ems, Franzensbad, Ischia, Marienbad, Nenndorf, Neuenahr, Ofen, Plombières, Soden, Strathpeffer, Tarasp, Toeplitz, Vichy, Weilbach, Wiesbaden, Wildbad.

—— *painful.* Hyoscyamus, Colchici Extr. c. Pulv. Doveri.

Gravel. Potass. Citras, Potas. Bicarb. *Mineral Water:* Marienbad.

Griping, to diminish. Anisum, Cardamoms, Hyoscyamus, Menth. Pip. Oleum.

Gums, inflamed. Krameriæ Tinct.

—— *spongy.* Gummi Rubri Tinct., Myrrhæ Tinct., Potass. Chloras, Quercus Decoct.

Hair falling off. Crinale Linimentum, Crinalis Lotio, Crotonis Linim.

—— *to Blacken.* Acid. Pyrogallic.

Hay Fever. Belladonna, Camphora Spirit., Cannab. Ind., Grindelia Robusta, Lobelia Inflata, Quiniæ Sulphas Neutr., Stramonium.

Hematuria. Acid. Sulph Dil., Acid. Tannic., Alumen, Galla, Ipecac., Matico, Plumbi Acet., Zincum.

Hæmatinics.—Section A.

Hemorrhage. Acid. Gallic., Acid. Tannic., Alumen, Argenti Oxidum, Catechu, Colloid Styptic, Erigerontis Oleum, Galla, Gummi Rubr., Matico, Plumb. Acetas, Terebinth. Oleum.

———— *internal.* Alum, Cinnamomum, Creasotum, Gummi Rubr.

———— *local.* Acid. Gallic. Glycerinum.

———— *passive.* Ferri Perchlor., Hæmatoxylum, Hamamelis Virgin. Tinct., Gummi Rubrum, Krameria.

———— *pulmonary.* Ergota, Plumb. Acet.

———— *Uterine.* Acid. Gallic., Acid. Tannic., Cannab. Indic., Ergota, Limonis Succus.

Hemorrhoids. Aloes Socot., Galbani Ung. Co., Gallæ Ung., Picis Pilulæ et Capsulæ, Piper Nigrum, Sulphur. *Mineral Waters:* Luhatschowitz, Mergentheim.

Hemoptysis. Galla, Digitalis, Plumb. c. Opio Pil.

Hæmostatics.—Section A.

Headache, bilious. Hyd. Subchlorid., Ammon. Liq., Menth. Pip. Ol.

———— *nervous.* Ammon. Bromid., Ammon. Fœt. Sp., Amyl Nitris, Potass. Bromid., Rosmarini Oleum, Ammon. Aromat. Spirit., Tinct. Succini.

———— *sick.* Caffeine, Guarana, Magnesia, Potass. Ferrocyanid.

Heartburn. Bismuthum, Doveri Pulvis, Magnesiæ Carb., Sodæ Bicarb.

Heat of Surface. Acetum, Acid. Acetic. Dil., Acid. Phosph. Dil.

Hectic Sweating. Acetum, Acid. Acetic. Dil., Acid. Gallic.

Hepatics.—See *Stimulants.*

Hepatitis. Ammon. Chlorid., Hyd. Subchlorid.

Hernia, strangulated. Chloroform, Enema Tabaci.

Herpes. Ferri Arsenias, Glycerinum, Hydrargyrum Ammoniatum, Ulmi Decoctum, Zincum.

Hooping Cough.—Vide *Whooping Cough.*

Hiccough. Anethum.

Hydrocele. Glycerinum Iodi.

Hydrocephalus. Hydr. Subchloridum.

Hydrophobia. Cannabis Indica.

Hypnotics.—Section A.

Hypochondria. Chloral, Cypripedin, Lavand. Oleum. *Mineral Water:* Homburg.

Hysteria. Ammon. Carb., Ammonii Bromid., Asafœtida, Cajuputi Ol., Castoreum, Lavand. Ol., Potass. Bromid., Rosmarini Ol., Rutæ Ol., Terebinthinæ Ol., Valeriana Radix, Zinci Valerianas. *Mineral Waters:* Homburg, Lippik, Spa.

Hysteric Nausea. Creasotum.

———— *Flatulence.* Asafœtidæ Tinct., Galbanum.

Impetigo. Hydrargyrum Ammon.

Incontinence of Urine. Acidum Benzoic., Buchu, Ergota.

Indigestion, Atonic. Gentiana, Ignatia, Pepsine. *Mineral Waters:* Kissingen, Marienbad, Orezza, Vals.

Influenza. Ammon. Liq. Acetat., Antim. Tart., Sp. Æther. Nitr.

Insects, to keep away. Camphor, Lavand. Oleum, Pyrethrum Roseum, Terebinth. Oleum.

Insensibility, to produce. Æther, Chloroform, Methylin. Bichlorid.

Insomnia.—See *Sleeplessness.*

Intermittents.—See *Fever.*

Intermittents with Drunkards. Piper Nigrum.

Iritis. Belladonna, Hydrarg. Subchlor., Hyoscyamus, Quinia.

Irritants.—Section A.

Irritation, Nervous. Cannabis Indica.

Issues, to keep open. Elemi Ung., Sabinæ Ung.

——— *to heal.* Cetacei Ung., Adeps Benzoat.

Itch.—See *Scabies.*

Itching of Skin, to allay. Acid. Hydrocy. Dil., Hydr. Oxidi Rub. Ung., Sodæ Carbonas, Mistura Amygdalæ Amaræ.

Jaundice. Hyd. Subchlorid., Potassæ Sulphas, Sapo Durus, Taraxacum.

Joints, Diseased
——— *Enlarged*
——— *Indurated* Ferri Iodidum, Iodum, Morrhuæ Oleum, Potass. Iodid., Veratriæ Ung., Potass. Iodid., Linum.

Kidneys, Disordered. Buchu, Dulcamara, Hemidesmus, Mezereum, Pareira, Terebinth. Ol., Uva Ursi. *Mineral Waters:* Fachingen, Kissingen, Leuk, Malvern, Shap, Vichy.

Kidneys, hemorrhage from. Acid. Gallic., Iron Alum.

Laryngitis, Chronic. Croton-Chloral.

Larynx, relaxed. Ammon. Bromid, Gargarisma.

Laxatives.—Section A.

Lead, Poisoning by. Alum, Iodum. *Mineral Water:* Weilbach.

Leech bites, to stop. Alum, Argent. Nitr., Ferri Perchlor., Ferri Chloroxid., Matico.

Leeches, to dislodge if swallowed. Sodii Chlorid.

Lepra. Acid. Carbolic., Arsenici Iodidum, Dulcamara, Glycerinum, Picis Ung., Potass. Sulphurata.

Leprosy. Balsam. Dipterocarpi.

Leucorrhœa. Acid. Gallic., Acid. Tannicum, Alumen, Catechu, Ferri Pernit. Liquor, Galla, Granati Cort., Gummi Rubrum, Krameria, Potass. Iodid., Quercus Cort., Santal. Flav. Oleum, Sodæ Sulpho-Carbolas, Styrax Præparatus, Zinci Sulph., Zinci Sulpho-Carbolas. *Mineral Waters:* Kreuznach, Wildungen.

Lice, to destroy. Hydrarg, Ammoniat., Hyd. Perchlor., Olivæ Oleum, Hydr. Oleatum.

Lichen. Ferri Arsenias, Glycerinum.

Lips, cracked. Bals. Peru.

Lithiasis. *Mineral Waters:* Baden-Baden, Mergentheim, Vals, Vichy.

Liver, Obstruction of. Acid. Nitro-Hydrochlor. Dil., Boldo, Chlori Liquor, Hydrargyrum, Podophyllin, Potass. Bromid., Potass. Nitras, Taraxacum. *Mineral Waters:* Aix-la-Chapelle, Carlsbad, Ems, Friedrichshall, Kissingen, Leamington.

Liver, Enlarged. Acid. Nitro-hydrochloric. Dil., Conium, Potass. Bromidum.

——— *Torpidity of.* Podophyllin, Potass. Nitras, Sapo Durus, Taraxacum.

Lumbago. Belladonna, Lin. Bellad. Comp., Picis Burgundicæ Empl., Quiniæ Sulphas.

Lupus. Ferri Arsenias.

Mania. Cannabis Indica, Ergota, Potass. Bromidum.

Measles. Acid. Carbolic.

Melæna. Hydrarg. Subchloridum.

Meningitis, Acute. Antim. Tart., Hydr. Subchloridum, Digitalis, Purgatives (Ice externally).

Menorrhagia. Alum, Beberiæ Sulphas, Ferri Pernitratis Liquor, Galla, Krameria, Uva Ursi, Vincæ Major. Ext. Fluid.

Menstruation, Defective. Ferrum, Myrrha.

——————— *Painful.* Ergota et Hyoscyam.

Mercury, Poisoning by. *Mineral Waters:* Weilbach.

Mesenteric Diseases. Aloes Socot.

Midges, to keep away. Tereb. Ol.

Milk Secretion, to increase. Fœniculum, Ricini Fol. Decoctum.

Mollities Ossium. Calcis Phosphas.

Mucous Discharges. Cantharis, Copaiba, Catechu, Cupri Sulph., Galla., Hydr. Perchlor., Iodum, Krameria, Plumbi Acet., Sodæ Chlor. Liquor, Tritici Decoctum.

——— *Membrane, Inflammation of.* Althæa Rad., Glycyrrhizæ Rad., Lini Semen. *Mineral Water:* Apollinaris.

Nævi. Alum, Liq. Ferri Perchlor. Fort. Liq. Sodii Ethylatis.

Narcotics.—Section A.

Nausea. Æther, Caryophyllum, Menthæ Pip. Oleum.

——— *in Hysteria.* Creasotum.

——— *in Pregnancy.* Cerii Oxalas, Creasotum, Pepsine.

Nervousness. Ammonii Bromid., Asafœtida, Camphor, Cantharidis

Tinctura, Castoreum, Cimicifugin, Humulus, Lavand. Tinct. Co., Moschus, Sodæ Arsenias, Sodæ Hypophosphis, Valeriana, Zinci Valerianas.
Nervous Affections. Cajuput. Ol.
Nervous Exhaustion. Acid. Bromohydric. (with Quinine). *Mineral Waters:* Ems, Gastein.
——— *Irritation.* Camphora, Cannabis Indica.
——— *System, Excited.* Chloral, Ammon. Bromidum, Hyoscyamus.
——— *Debility.* Actæa Racemosa, Calcis Hypophosphis, Phosphorus. *Mineral Water:* Gastein.
Neuralgia. Acid. Arsenios., Acid. Sulphuros., Aconiti Lin., Actæa Racemosa, Ammon. Bromidum, Ammon. Chlorid., Atropiæ Solut. hypodermically, Belladonnæ Lin., Camphoræ Lin., Camphor. Lin. Co., Cannabis Indica, Cimicifuga, Cinchona, Conium, Croton-Chloral. Hydrat., Crotonis Liniment., Ferrum, Ferri Oxid. Magnet., Gelsemii Tinctura, Gelsemin, Iodoform, Menth. Pip. Oleum, Menthol, Papaveris Decoctum, Quiniæ Sulph., Q. Dikinat. Syr., Scutellarin, Sinapis Cataplasma, Veratriæ Ung., Veratrum Viride, Zinci Valerianas.
Night Sweats of Phthisis. Acid. Gallic., Acid. Sulphuric.
Nipples, Sore. Argenti Nitras, Bals. Peru., Boracis Ung., Sodæ Chlorinatæ Liq.
Nitrate of Silver Stains, to remove. Potass. Cyanid., Potass. Iodid.
Nocturnal Emissions. Belladonna, Ferri Bromidum.
Nodes, Syphilitic. Emp. Ammoniaci c. Hydrarg., Hyd. Iodid. Rub. Ung.
Nymphomania. Potass. Bromidum.
Nutritive.—Section A.

Obesity. Fucus Vesiculosus. *Mineral Water:* Tarasp.
Ophthalmia. Alumen, Ammoniæ Acetat. Liquor, Opium, Ung. Hyd. Nit. Dil., Zinci Acetas, Zinci Sulphas.
Ozæna. Acid. Carbolic., Potass. Permanganas, Sodii Chloridum.

Palpitation. Cannab. Indic.
Palsy. Nux Vomica. *Mineral Water:* Ischia.
Paralysis. Belladonna, Ergota, Nux Vomica, Strychnia. *Mineral Waters:* Aix-la-Chapelle, Baden-Baden, Eilsen, Ischia, Kreuznach, Toeplitz.
Paralysis of Lead Poisoning. Strychnine.
Paralysis of the Tongue. Pyrethrum.
Paraplegia. Cantharidis Tinctura.
Parasitic Lichen. Acid. Sulphuros.
Parturient. Ergot, Gossypii Tinct.
Pediculi. Adeps Præpar., Hyd. Ammon. Ung., Sabadilla.
Pericarditis. Charta Epispastica, Potassæ Liquor.
Periostitis. Ammon. Chlorid., Potassæ Liquor.
Perspiration, to diminish. Acetum, Acid. Sulph. Dilut.
——— *Fœtid.* Acid. Carbolic. Glycer., Plumbi Oxid. Ung., Zinci Oxid. Ung.
Phagedenic Sores. Acid. Carbolic., Acid. Nitricum.
Phthisis. Acid. Carbolic., Acid. Gallic., Aconiti Tinct., Calcis Hypophosphis, Camph. Co. Tinct., Conium, Croton-Chloral. Hydrat., Iodi Vapor, Morrhuæ Oleum, Plumbi Acetas, Saccharum Lactis.
——— *Chronic.* Iodum.
Piles.—See Hemorrhoids.
Pityriasis Versicolor. Dulcamara, Glycerinum, Borax.
Placenta, Expulsion of. Borax, Ergota.
Plethora. *Mineral Waters:* Franzensbad, Homburg.
Pleuritis. Cantharis, Crotonis Linim., Hydrarg. Subchlor., Potassæ Liquor.
Pneumonia. Ammon. Liquor, Antim. Tartarata, Cantharis, Æther. Nitr. Sp., Plumbi Acetas.
Porrigo. Hydrarg. Nit. Ung., Hydrarg. Ammon. Ung., Hyd. Perchlor. Ung.
Pregnancy, Nausea of. Creasotum, Calcis Sacchar. Liquor, Cerii Oxalas, Pepsine, Potass. Acetas.
Prolapsus Ani. Acid. Gallic., Alum. Sulph., Cupri Sulph., Gummi Rubr. Extr. Liq., Krameriæ Rad., Suppositoria.
——— *Uteri.* Quercus Cort. Decoct.
Prostate, Disease of. Buchu.
Prostration. Moschus, Spirit. Vini Gallici Mistura.
Prurigo. Glycerinum, *Genitalium,* Cupri Sulph., *Senilis,* Staphisagria.
Pruritus Ani. Plumb. Carb. Ung.
——— *Pudendi.* Argent. Nitr. Solut. 2 grs. to the ℥j.
——— *Scroti.* Limonis Succus.
Psoriasis. Acid. Carbolic., A. Chrysophanic, A. Pyrogallic., A. Salicylic., Chrysarobin, Dulcamara, Saponis Emp., Glycerinum, Ferri Arsenias, Picis Unguent., Potass. Arsenitis, Potassa Sulphurata, Soda Subcarb. Solut.

Pulmonary Chronic Affections. Pix Burgundica. *Mineral Waters:* Charlottenbrunnen, Clifton, Kronthal, Moffat, St. Moritz, Weilbach.

Pulse, to quicken. Cardamomum, Castoreum.

Pulse, to retard. A. Carbolic., Aconitum.

Pupil, to Dilate. Belladonna, Atropia, Hyoscyamus, Stramonium.

——— *to Contract.* Opium, Physostigmatis Extractum, Pilocarpia.

Purgatives.—Section A.

Putrescence, to Correct. Acid. Carbolic., Potassæ Permang., Thymol.

Pyemia. Potassæ Sulphis.

Pyrosis. Acid. Gallic., Bismuthi Subnitras, Bismuth. Carb., Catechu, Cerii Oxalas, Kino, Manganesii Oxid. Nigrum.

Refrigerants.—Section A.

Restoratives.—Section A.

Retention of Urine.—See Urine.

Rheumatism. Acid. Arsen., Acid. Salicylic, Actæa Racemosa, Ammon. Chlorid., Ammon. Phosphas, Belladonnæ Compositum Lin., Cimicifuga, Cimicifugin, Chloroform, Camphoræ Lin. Comp., Colchicum, Crotonis Linim., Lithiæ Citras, Lithiæ Guaiacas, Mezereum, Opii Liniment., Phytolaccin, Pini Sylv. Ol., Potass. Liquor, P. Acetas, P. Bicarbonas, P. Citras, P. Iodidum, Salicin, Sodæ Salicylas, Veratrum Viride. *Mineral Waters:* Adelheidsquelle, Aix-les-Bains, Alexandersbad, Baden, Baden-Baden, Baréges, Bath, Berka, Buxton, Carlsbad, Cauterets, Eilsen, Franzensbad, Ischia, Kreuznach, Landeck, Langenbrücken, Nenndorf, Neuenahr, Ofen, Plombières, Schinznach, Strathpeffer, Tarasp, Toeplitz, Weilbach, Wiesbaden, Wildbad, Woodhall.

——— — *Acute.* Acid. Salicylic., Aconitum, Limonis Succus, Potass. Acet. et Bicarb., Colchicum, Pulv. Doveri, Salicin, Tinct. Ferri Perchlor.

——— *Chronic* Acid. Arsenios, Antim. Sulphurata, Armoracia, Bals. Peru., Colchicum, Conium, Buchu, Cajuputi Ol., Dulcamara, Guaiacum, Iodum, Camph. Co. Lin., Morrhuæ Oleum, Picis Burgundicæ Emplast., Potassæ Liquor, Syr. Quiniæ Hydriod., Sabina, Sarsæ Rad., Sassafras, Serpentaria, Sodii Iodid., Sulphur, Chelsea Pensioner, Terebinth. Oleum, Iodoform. *Mineral Waters:* Baréges Berka, Franzensbad, Lucca, Ofen, Toeplitz, Wiesbaden, Woodhall.

Rheumatism, painful. Belladonna, Hyoscyamus, Lin. Camph. Co.

Rickets, Rachitis. Acid. Phosphor. Dil., Calcis Liquor, Calcis Phosphas, Creta Præparata, Ferri Phosphas, Morrhuæ Oleum, Parrish's Syrup.

Ringworm. Araroba or Goa Powder, Cantharis, Creasoti Ung.

Rubefacients.—Section A.

Salivation, to produce. Hydrarg. Liniment., Hydr. Iodid. Vir.

——— *Obstinate.* Creasotum.

Salivary Glands, Stimulant of. Pyrethrum, Armoracia.

Sarcina Ventriculi. Acid. Sulphuros., Sodæ Sulphis, Sodæ Hyposulphis.

Scabies. Acid. Carbolic., Adeps Præparatus, Ammonii Chloridum, Calcis Chlorin. Liq., Hydrarg. Ammoniatum, Naphthalene, Potass. Sulphurata, Sabinæ Succus, Sulphocarbolates, Sulph. Co. Ung., Sulph. Ung.

Scalds. Acid. Carbolic. c. Oleo, Acid. Sulphuros., Linim. Calcis, Lini Oleum, Sp. Vini Rect.

Scald Head.—See *Tinea Capitis.*

Scarlatina. Acid. Carbolic., Chlori Liquor, Potass. Chloras, Sodæ Chlorinat. Liquor.

Sciatica. Aconiti Lin., Iodoform, Bellad. Lin. Comp., Opium.—See also *Rheumatism.*

Scorbutic Affections. Sassafras.

Scrofula. Calcis Phosphas, Creta Præparata, Ferri Iodid., Fucus Vesiculosus, Hyd. Iod. Rub., Hyd. Iod. Virid., Hyd. Subchlor., Iodum, Mezereum, Morrhuæ Oleum, Potass. Bromid., Potass. Liquor, Pot. Bicarb., Quin. Sulph., Sodæ Bicarb., Sodæ Hyposulphis, Sodii Iodid. *Mineral Waters:* Adelheidsquelle, Arnstadt, Baréges, Cauterets, Ems, Ischia, Kœnigsdorff, Kosen, Krankenheil, Kreuznach, Luhatschowitz, Neuenahr, Reichenhall, St. Moritz, Shap, Soden, Strathpeffer, Vals, Woodhall.

Scurvy. Potass. Citras, Limonis Succus, Sassafras Radix.

Scybala. Scammonium.

Sea Sickness. Amyl Nitris, Camphor, Capsici Tinct., Chloroformum, Creasotum, Cocainæ Hydrochloras, Sodii Bromidum.

Sedatives.—Section A.

Serous Inflammation. Hyd. Subchlor., Potassæ Liquor.

Sialogogues.—Section A.
Sickness, to arrest. Acid. Carbolic., Acid. Sulphuros., Acid. Hydrocyan. Dil., Calcii Chlorid., Calcis Saccharatus Liquor, Menth. Pip. Oleum.—See also *Vomiting*.
——— *in Pregnancy.* Cerii Oxalas, Pepsine, Potassæ Acetas.
Skin Abraded. Collodion.—See *Excoriation.*
Skin, Cracks in. Cydonii Decoct.
—— *Diseases of.* Abri Precatorii Pasta, Acid Chrysophanic, Boracis Unguentum, Calcis Chlorinat. Liq., Chrysarobin, Gynocardiæ Oleum, Huile de Cade, Liquor Carbon. Detergens, Naphthalene, Naphthol, Sulphur, Sodæ Arseniatis Liquor, Balneum Alkalinum, Picis Unguentum.
—— *Chronic diseases of.* Acid. Arseniosum, Bismuthi Subnitras, Glycerinum, Bismuthi Nitras, Hyd. Nit. Ung., Hydrarg. Perchlor., Pix Liquida, Hyd. Iodid. Viride, Hyd. Ammon., Hydrarg. Iodid. Rub., Hyd. Oxid. Flav., Hydrarg. Subchlor., Iodum, Mezerei Cortex, Potass. Liquor, Sodæ Arsenias, Sulph. Iodid. Ung.—See also *Cutaneous diseases.*
—— *Venereal.* Mezerei Radix, Sarsa.
—— *Parasitic.* Sodæ Hyposulphis.
—— *Parasitic Lichens.* Acid. Sulphurosum.
—— *Squamous.* Creasotum, Dulcamara, Ferri Arsenias.
—— *Irritable.* Acid. Citric., Amylum, Glycerin. Amyli, Carbon. Deterg. Liq.
Skin, Itching of. Acid. Hydrocy. Dil., Amygd. Amaræ Mist., Acid. Citric., Acid. Tartaric., Calcis Chlorata.
—— *Tender.* ' Chloroformi Linimentum.
Sleeplessness. Ammon. Bromid., Chloral Hydrate, Cannab. Indica, Hyoscyamus, Humulus, Morphiæ Bimeconatis Liquor, Potass. Bromidum, Opium.
Small Pox. Acid. Carbolic., Chlori Liq., Potassæ Chloras.
Snake Bites. Ammon. Liquor, Sodii Chlorid.
Soporifics.—Section A.
Sores, Bed.—See *Bed sores.*
—— *Cancerous.* Chlori Liquor, Iodoform, Hydr. Oxid. Rub.
—— *Gangrenous.* Alum, Emplastrum Acidi Carbolici, Ferri Perchlorid., Potass. Permang., Sabinæ Succus.
Sores, Irritable. Sambuci Flor. Ung., Sambuci Viride Ung.
—— *Malignant.* Zinci Chlorid.
—— *Phagedenic.* Acid. Nitric.
—— *Putrid.* Acid. Carbolic., Carbo Ligni.
—— *Venereal.* Hydr. Subchlor., Lotio Nigra.
Sore Nipples. Argenti Nitras, Bals. Peru., Borax, Ferri Sulph. Solut., Sodæ Chlorin. Liq.
—— *Throats.* Acid. Sulphuros. Spray, Acid. Tannic. Spray, Cubeba, Gummi Rubrum, Mori Syrup., Myrrha, Potass. Nitras, Potass. Chloras, Rosæ Infus.
———— *Malignant.* Argent. Nitras, Capsicum, Chlori Liquor.
———— *Putrid.* Acid. Carbolic., Potass. Permang., Chlori Liquor.
———— *Relaxed.* Alum, Capsicum, Gummi Rubri, Krameria.
———— *Ulcerated.* Acid. Hydrochlor. Dil., Hydrarg. Perchlorid.
Spasmodic Affections. Cajuput. Ol.
Spasmodic Cough. Acid. Hydrocy. Dil.
Spasms. Sinapis Cataplasma, Valeriana, Cannabis Indica.
——— *Abdominal.* Asafœtida, Menthæ Piper. Oleum.
Spleen, Enlargement of. Arsenicalis Liquor, Ferri Sulphas, Ferrum Redactum, Potass. Bromid., Quinia.
Sprains. Acetum, Acid. Acetic. Dil., Plumbi Subacet. Liquor Dil., Arnica, Sodii Chlorid., Sp. Vini Rectif.
Stimulants.—Section A.
Stings. Ammoniæ Liquor, Chloroform, Ipecacuanha, Sodæ Bicarbonas.
Stomach Ache. Æther, Sodæ Bicarb.
Stomach, Debility of. Pruni Virg. Syrup., Aurantii Tinctura.
——— *Cramp in.* Æther.
——— *Irritability of.* Bismuthum, Anthemis Flor., Saccharum Lactis.
——— *Ulceration of.* Nitrate of Silver.
——— *Weak.* Cinchona.
Stomachics.—Section A.
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Styptics.—Section A.
Sudorifics.—Section A.
Suppurating Surfaces. Acidum Carbolicum, Zinci Sulph. Fusum.
Suppuration, to Promote. Sabinæ Ung.
Sweating, Hectic. Acetum, Acid. Acetic. Dil., Acid. Gallic., Acid. Sulph. Dil.
Syncope. Ammon. Liquor, Æther.
Synovitis, Chronic. Emp. Ammon. c. Hydrarg.
Syphilis. Conium, Corydalin, Ferri Iodidi Syr., Hyd. Subchlor., Hyd.

Iod. Rub., Hyd. Iod. Virid., Hyd. Perchlor., Iodum, Mezereum, Potass. Iodid., Potass. Liquor, Sarsæ Rad., Sassafras, Sodæ Bicarbonas, Sodæ Hyposulphis, Sodii Iodid. *Mineral Waters:* Aix-la-Chapelle, Kreuznach, Vals, Woodhall.
Syphilitic Nodes. Emplastrum Hydrargyri, Hyd. Iod. Rub. Ung., Ammon. c. Hydr. Emp., Hyd. Nitr. Acid. Liq.
——— *Warts.* Acid. Acet. Glaciale, Acid. Nitricum, Cupri Sulphas.
——— *Ulcers.* Acid. Carbolic.

Tabes Mesenterica. Morrhuæ Oleum.
Tape Worm.—See *Anthelmintics.*
Tetanus. Aconitum, Cannabis Indica, Chloral, Physostigmat. Faba.
Tetter. Picis Ung.
Thirst, to allay. Acid. Citric., Acid. Phosphoric., Acid. Tartaric.
Throat, Relaxed. Acid. Tannic., Alumen, Argent. Nitras, Capsicum, Gummi Rubrum.
——— *Fœtid.* Acid. Sulphuros., Chlori Liquor Spray.
——— *Sore.* Acid. Carbolic., Acid. Hydrochlor. Dil., Acid. Sulphuros. Spray, Acid. Tannic. Spray, Sodæ Chlorinat. Liq., Potassæ Chloras.—See also *Sore Throat.*
Thrush. Acid. Hydrochlor. Dil.
Tic Douloureux. Ferri Oxid. Magnet., Ferri et Quiniæ Citras, Lin. Camph. Comp.
Tinea Capitis. Arsenici Iodidum, application; Acid. Acetic., Acid. Carbolic., Antim. Tart., Cupri Sulph., Picis Ung.
——— *Favosa.*—See *Porrigo.*
Temperature, to diminish. Aconitum.
Tonics.—Section A.
Tonsils, turgid. Acid. Carbolic.
——— *Relaxed.* Cupri Sulphas, Zingiber.
——— *Ulceration of.* Iodi Gargarisma.
Toothache. Acid. Sulphuros. Spray, Cajuputi Oleum, Capsici Lin., Caryophylli Oleum, Chloroform. c. Camphorâ, Creasotum, Gelsemii Tinctura, Pyrethrum, Quiniæ Ammon. Liq.
Tubercles, Syphilitic. Hydrarg. Nit. Acid. Liquor.
Tuberculosis. Pil. Hyd. Biniodidi, Pil. Hyd. Perchlor. c. Aconit. *Mineral Waters:* Achselmannstein, Kreuznach, Lippspringe, Ottilienquelle, Reichenhall, Soden.
Tumours, Indolent. Ammon. Chlorid., Ung. Hydrarg. Co.
Tumours, Malignant. Acidum Nitricum, Potass. Caustica.
——— *Painful.* Humulus, Hyoscyamus.
Typhoid Fever. Acid. Hydrochloric., Ammon. Liquor, Amyli Enema, Argenti Nitras, Belladonna, Chlori Liquor, Cerevisiæ Fermentum, Sumbul Radix, Serpentariæ Rad.—See *Fever.*
Typhoid state of system. Arnica.
Typhus. Acid. Nitric. Dil., Baptisin, Potass. Bromid., Potass. Chloras, Rhei Radix, Serpentariæ Radix, Sumbul Rad., Sodæ Chlorin. Liq.

Ulcerations. Zinci Oxidum.
Ulcers. Acid. Boracic., Argenti Nitras, Calcis Chloratæ Liq., Collodium, Creta Præparat., Cupri Sulphas, Mel, Plumbi Acetas, Plumbi Carb., Resina Emp., Sabina, Zinci Sulphas, Zinci Ox. Ung.
—— *Cancerous.* Ferri Arsenias.
—— *Foul or Fœtid.* Acid. Carbolic., Acid. Salicylic., Acid. Sulphuros., Carbo Animal. Purif., Carbo Ligni, Cataplasma Fermenti, Chlori Liq., Calx Chlorata, Mel, Potass. Permanganas.
—— *Indolent.* Bals. Peruv., Benzoini Co. Tinct., Hydrarg. Lin., Kino Pulv., Resinæ Ung., Sabinæ Ung.
—— *Malignant.* Potassa Caustica.
—— *Painful.* Hyoscyamus.
—— *Sloughing.* Chloroform, Cataplasma Fermenti.
—— *Syphilitic.* Acid. Carbolic., Hyd. Nit. Acid. Liquor.
Urine, Uric Acid in. Ammon. Phosphas, Borax, Calcis Liq., Lithiæ Citras, Potass. Bicarb., Sodæ Bicarbonas, Sodæ Sulphas. *Mineral Water:* Vichy.
—— *Red Gravel.* Buchu, Potass. Bicarb., Potass. Citras.
—— *Phosphatic.* Acidum Phosphoric. Dilut., Ammon. Benzoas.
—— *Incontinence of.* Acid. Benzoic., Buchu, Ergota.
—— *Retention of.* Buchu, Tabaci Enema.
—— *Nocturnal Incontinence.* Belladonna, Benzoinum, Chloral.
—— *Putrid.* Acid. Carbolic., Creasotum, Carbo Animal., Papiers Carbonifères.
Uterine Hemorrhage. Acid. Tannic., Limonis Succus.
——— *or Vesical Catarrh.* Potass. Chloras, Triticum Repens, Matico.

Uterus, to contract. Borax, Cannab. Indica, Ergota.
Uvula, Relaxed. Catechu, Zingiber, Capsicum, Gummi Rubrum, Krameria, Pyrethrum, Rosæ Inf. Acid.

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Vomiting, to allay.—See Antemetics, Section A.
——— *in Pregnancy.* Cerii Oxalas, Calcis Saccharat. Liquor.
——— *Chronic.* Calcis Liquor, Calcii Chloridum, Cerii Oxalas.

Warts. Acid. Acetic. Glaciale, Acid. Nitric., Ammonii Chlor., Argenti Nitras, Sabina.
Warts, Syphilitic. Cupri Sulph., Hyd. Iod. Rub. Ung., Hyd. Nit. Acid. Liquor, Sabina.
Wasp Sting. Ammon. Liquor, Chloroform.
Wax, indurated. Fel Bovinum.
Whites.—See *Leucorrhœa.*
Whooping Cough. Acid. Carbolic., Ammon. Bromid., Belladonna, Chloral, Cocci Mistura, Succini Lin., Trifolium Syrupus.
Worms, Ascarides, Tape, and Round Worms.—See *Anthelmintics.*
Wounds. Acid. Boracic., Acid. Sulphuros., Benz. Tinct. Co., Collodium Flexile, Glycerinum, Resinæ Emplastrum, Tinct. Benzoin. Comp.
——— *Lacerated.* Acid. Carbolic. c. Oleo, Acid. Sulphurosum.

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The Names adopted by the British Pharmacopœia are put in Roman letters; all others, whether referring to Official or Not Official Medicines, are put in Italics. The Appendix is not indexed.

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,, ,, diluted		18
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,, *Metaphosphoric*		22
,, Nitric		19
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,, ,, *Lotio*		8
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,, Carbolici *Emplastrum*		12
,, ,, *Gargarisma*		10
,, ,, Glycerinum	5 to 10 minims	10
,, ,, *Injectio*		10
,, ,, ,, *Hypodermica*		10
,, ,, *Lotio*		11
,, ,, *Spray*		10
,, ,, Suppositoria c. Sapone	1 gr. in each	11
,, ,, Unguentum		11
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,, Gallici Glycerinum	10 to 60 minims	14
,, ,, *Unguentum*		15
,, Hydrocyanici Vapor		17
,, *Pyrogallici Unguentum*		23
,, Salicylici Unguentum		24
,, Tannici Glycerinum	10 to 40 minims	27
,, ,, *c. Opio Suppositorium*		28
,, ,, *Pessary*		28
,, ,, c. Sapone Suppositoria		27
,, ,, Suppositoria		27
,, ,, Trochisci	½ gr. in each.—1 to 6 loz.	28
,, ,, *Unguentum*		28
,, ,, ,, *c. Opio*		28
Acidum Aceticum		3
,, ,, *aromaticum*		5
,, ,, *concentratum*		5
,, ,, dilutum	1 to 2 drms.	4
,, ,, glaciale		4
,, ,, *for subcutaneous injection*		4
,, *Arsenicosum*		5
,, Arseniosum	$\frac{1}{60}$ to $\frac{1}{12}$ gr.	5
,, Benzoicum	5 to 15 grs.	7
,, Boricum	5 to 10 grs.	8
,, Carbolicum	1 to 3 grs.	9
,, ,, *Crudum*		11
,, ,, Liquefactum		10
,, ,, *Solutum*		11
,, Chromicum		12
,, *Chrysophanicum*		13
,, Citricum	10 to 30 grs.	13
,, Gallicum	3 to 10 grs.—10 to 60 in albuminuria	14
,, Hydrobromicum dilutum		15
,, Hydrochloricum		15
,, ,, dilutum	10 to 30 minims	16
,, Hydrocyanicum dilutum	2 to 8 minims	16
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,, ,, dilutum		18
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,, ,, ,, *Bath*		20
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,, ,, *Alcoholisatum*		26
,, ,, Aromaticum	5 to 30 minims	25
,, ,, dilutum	5 to 30 minims	25
,, Sulphurosum	½ to 1 drm.	26
,, *Sulpho-carbolicum*		12
,, Tannicum	2 to 10 grs.	26
,, Tartaricum	10 to 30 grs.	28
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,, Root		29
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,, *Chloroformum*		30
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,, *Extr. Rad. Alcoholic*		30
,, Folia		29
,, Linimentum		30
,, Radix		29
,, *Succus*		29
,, Tinctura	5 to 15 minims.	30
,, *Trochisci*		30
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,, *Sulphuricus*		32
,, ,, *Alcoholicus*		33
Ætheris Nitrosi Spiritus	½ to 2 drms.	328
,, Spiritus	30 to 60 minims	33
,, ,, Compositus	30 to 120 minims	33
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,, Decoctum Comp.	½ to 2 oz.	37, 38
,, Enema		36, 38
,, Pilula et Asafœtidæ	5 to 10 grs.	38
,, ,, *Diluta*		37
,, ,, et Ferri	5 to 10 grs.	36
,, ,, et Myrrhæ	5 to 10 grs.	38
,, Socotrinæ Extractum	1½ to 3 grs.	38
,, ,, Pilula	5 to 10 grs.	38
,, Tinctura	1 to 2 drms.	38
,, Vinum	1 to 2 drms.	38
Aloin	½ to 2 grs.	39
Alum		40
,, *Cataplasm*		41
,, *Chlor.*		41
,, *Gargle*		41
,, *Iron*		41
,, *Roche*		40
,, *Whey*		41
Alumen	10 to 20 grs.	40
,, exsiccatum		41
,, *Ustum*		41
Alumina		40
Aluminis Glycerinum		41
Aluminium		39
,, *Chloride of*		41

Official Names in Roman; all others in Italics.

AM	Dose.	Page
Amber, Oil of		335
„ *Tincture of*		335
American Eclectic Remedies		374
„ *Hellebore*		353
Amidon		53
„ *Glycéré*		53
Ammonia		42
„ *Liquida*		43
Ammoniaci Emplastr. c. Hydrarg		189
„ Mistura	½ to 1 oz.	42
„ „ *Comp.*		42
„ „ *Ipec. et Lobeliæ*		42
Ammoniacum	10 to 20 grs.	41
Ammoniaque Benzoate		45
„ *Liquide*		43
Ammoniæ Aromaticus Spiritus	20 to 60 minims	47
„ *Arsenitis Liquor*		7
„ Linimentum		44
„ Liquor	10 to 20 minims	43
„ „ fortior		43
„ *Murias. See* Ammonii Chloridum		48
„ *Sesquicarbonas. See* Ammonii Carbonas		46
„ Spiritus Aromaticus	20 to 60 minims	47
„ „ Fœtidus		44
„ *Tinctura Composita*		44
Ammoniated Mercury		198
Ammonii Acetatis Liquor	2 to 6 drms.	45
„ „ „ fortior	20 to 60 minims	44
„ Benzoas	10 to 20 grs.	45
„ Bromidum	5 to 20 grs.	46
„ „ *Lozenges*		46
„ Carbonas	3 to 10 grs.	46
„ Citratis Liquor	2 to 6 drms.	49
„ „ „ fortior	30 to 90 minims	48
„ Chloridum	10 grs.	48
„ „ *Draught*		48
„ „ *Lotion*		48
„ „ *Lozenges*		48
„ *Hydrochloras*		48
„ *Iodidum*	2 to 5 grs.	49
„ „ *Ointment*		49
„ Nitras		49
„ Phosphas	5 to 20 grs.	49
Ammonio Ferric Alum		41
Ammonium		42
„ *Bromatum*		46
„ *Carbonicum*		39
„ *Chloratum*		48
„ *Phosphoricum*		50
Amygdala Amara		50

AM to AN	Dose.	Page
Amygdala Dulcis		51
Amygdalæ *Amaræ Essentia*		50
„ „ *Mistura*		50
,, ,, *Oleum*		50
„ *Emulsio*		51
„ Mistura	1 to 2 oz.	51
,, Oleum	2 to 4 drms.	51
„ Pulvis Compositus	60 to 120 grs.	51
Amyl, *Hydrate of*		35
,, Nitris	by inhalation 2 to 5 minims. Caution required	52
Amyli *Decoctum*		53
„ Glycerinum		53
„ Mucilago		53
Amylic Alcohol		35
Amylum		52
,, *Iodatum*		53
Anacyclus Officinarum		285
,, *Pyrethrum*		285
Anæsthetic Mixture, Regnauld's		121
Analysis of Mineral Springs. See Waters, Mineral		377
Aneth		54
Anethi Aqua	½ to 1 oz.	54
„ Fructus		54
,, Oleum	1 to 4 minims	54
Angustura Bark		147
Angusturæ Infusum		147
Animal Charcoal		106
„ „ purified		106
Anisi Aqua		54
„ Essentia	10 to 20 minims	55
„ Fructus		54
„ Oleum	1 to 4 minims	55
,, Stellati Fructus		54
,, *Spiritus*		55
,, *Tinctura*		55
Anodyne Spirit, Hoffman's, occurs twice on this page		33
Anthemidis Extractum	2 to 10 grs.	55
„ Flores		55
,, Infusum	1 to 3 oz.	55
„ Oleum	1 to 4 minims	56
Anthemis nobilis		55
Antidotes to Acids, Arsenious		6
„ „ Carbolic		10
,, „ Hydrochloric		16
„ „ Hydrocyanic		17
„ ,, Nitric		19
„ ,, Nitro-hydrochloric		20
„ „ *Prussic*		17
„ „ Sulphuric		25
„ Aconite		30

Antidotes to Alkalies, Potash 273
,, ,, Soda. Same as for Potash 273
,, Antimony Chloride 57
,, ,, Tartarated 59
,, Aqua Laurocerasi. Same as for Hydrocyanic Acid . . . 17
,, Argenti Nitras 65
,, Arnica 67
,, Arseniate of Iron. Same as for Arsenious Acid 6
,, Arseniate of Sodium. Same as Arsenious Acid 6
,, Arsenic 6
,, Atropine. Same as for Belladonna 76
,, Belladonna 76
,, Calx Chlorinata 96
,, Camphor 99
,, Cannabis Indica 102
,, Cantharides 103
,, Chloral Hydrate 118
,, Chlori Liquor 119
,, Chloride of Lime 96
,, ,, Zinc 356
,, Chloroform 120
,, Colchicum 132
,, Conium 136
,, Copper, Sulphate of 146
,, Croton Oil 144
,, Cupri Sulphas 146
,, Digitalis 149
,, *Duboisine*. Same as for Atropine 150
,, Elaterium 151
,, Ferri Arsenias 161
,, Gelsemium 177
,, Henbane 200
,, Hydrargyri Perchloridum 196
,, Hyoscyamus 200
,, Iodine 206
,, Iron, Arseniate of 161
,, Laurocerasi Folia. *See* Acidum Hydrocyanicum 17
,, Lead 270
,, Liquor Calcis Chlorinatæ 96
,, Lobelia 224
,, Mercury Perchloride 196
,, Morphine 238
,, Nux Vomica 244
,, Opium 250
,, Perchloride of Mercury 196
,, Potash 273
,, *Resorcin* 292
,, Savin 300
,, Silver Nitrate 65
,, Soda. Same as for Potash 273

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AN to AQ	Dose.	Page
Antidotes to Strychnine		334
,, Stramonium. Same as for Belladonna		76, 333
,, Tabaci Folia		340
,, Zinc, Salts of		354
Antidotum Arsenici		6
Antimoniale Vinum	5 to 30 minims	59
Antimonialis Pulvis	2 to 6 grs.	57
Antimonii Chloridi Liquor		56
,, Oxidum	1 to 3 grs.	57
,, *Oxysulphuretum. See* Ant. Sulphuratum		58
Antimonii *et Potassii Tartras. See* Ant. Tartaratum		58
,, *Sulphuretum Aureum. See* Ant. Sulphuratum		58
,, *Sulphuretum præcipitatum. See* Ant. Sulphuratum		58
,, Tartarati Unguentum		59
,, *Vinum*		59
Antimonium		56
,, Nigrum Purificatum		58
,, Sulphuratum	1 to 5 grs.	58
,, Tartaratum	Diaphoretic $\frac{1}{16}$ to $\frac{1}{8}$ gr. Depressant $\frac{1}{8}$ to 1 gr. Emetic . 1 to 2 grs.	58
Antimony		56
,, Black		58
,, *Prepared Sulphuret of*		58
,, Oxide of		57
,, Solution of Chloride of		56
,, *Sulphide of*		58
,, Sulphurated		58
,, Tartarated		58
Antipyrin		60
Apis Mellifica		113, 231
Apomorphinæ Hydrochloras		60
,, Injectio Hypodermica		60
Apozème de Cousso		147
,, *Grenadier*		183
Appendix		360
Aqua		60
,, *(group)*		63
,, *Amygd. Amar.*		216
,, Anethi	½ to 1 oz.	54
,, Anisi	½ to 1 oz.	54
,, Aurantii Floris	½ to 1 oz.	72
,, *Calcariæ*		93
,, *Calcis. See* Liquor		93
,, Camphoræ	1 to 2 oz.	99
,, Carui	1 to 2 oz.	108
,, *Chlorata*		118
,, *Chlori*		118
,, Chloroformi		120
,, Cinnamomi	1 to 2 oz.	128

1 : [illegible]

1 : [illegible]

[illegible] to [illegible]

[illegible] to 2 grs.

[illegible] 3 drms.

Official Names in Roman; all others in Italics.

AR to AU	Dose.	Page
Arseniate of Sodium	$\frac{1}{16}$ to $\frac{1}{8}$ gr.	318
Arseniatis Sodii Liquor	5 to 10 minims	319
Arsenic, Iodide of		68
,, *White*		5
Arsenical Caustic Powders		7
,, *Paste for cancer*		7
,, ,, *Dentists*		7
Arsenicalis Liquor	2 to 8 minims	6
Arsenici Antidotum		6
,, *Chloridi Liquor*		7
,, *et Hydrargyri Hydriodatis Liquor.*	*See* Arsenii Iodidum	68
,, *Iodidum. See* Arsenii Iodidum		68
,, Liquor Hydrochloricus	2 to 8 minims	6
Arsenii et Hydrargyri Iodidi Liquor		68
,, Iodidum		68
Arsenium		67
,, *album. See* Acidum Arseniosum		5
Arsenious Acid	$\frac{1}{60}$ to $\frac{1}{12}$ gr.	5
,, *Anhydride*		5
Artemisia Maritima		302
Articles employed in chemical testing		360
Artificial Human Milk		214
Asafœtida	5 to 20 grs.	68
Asafœtidæ Enema		69
,, Pilula composita	5 to 10 grs.	69
,, Tinctura	$\frac{1}{2}$ to 1 drm.	69
Asclepedin		374
Aspidium Filix-Mas		173
Aspidii Oleoresina		174
Aspidosperma Quebracho		286
Astragalus gummifer		347
Atropa Belladonna		77
Atropinæ Sulphatis Guttæ		70
,, ,, ,, *Fortiores*		70
Atropina		69
Atropinæ *Oleatum*		70
,, Lamellæ		70
,, Sulphatis		70
,, ,, Liquor	1 to 4 minims	70
,, Unguentum		70
Atropine		69
,, *Discs*		70
,, *Gelatine*		70
,, *Paper*		70
Aurantii Amari Cortex		71
,, Cortex		70
,, *Corticis Oleum*		72
,, *Dulcis Cortex*		71
,, Floris Aqua	$\frac{1}{2}$ to 1 oz.	72
,, ,, Syrupus	1 to 2 drms.	72

Official Names in Roman; all others in Italics.

AU to BE	Dose.	Page
Aurantii Florum Oleum		72
,, Fructus		71
,, Infusum	1 to 2 oz.	71
,, ,, compositum	1 to 2 oz.	71
,, Syrupus	1 to 2 drms.	71
,, Tinctura	1 to 2 drms.	71
,, ,, Recentis	1 to 2 drms.	71
,, Vinum		72
Autenriethi Unguentum		59
Azotic Acid		19
Azotate de Bismuth		83
,, *Mercurique Liquide*		192
,, *de Potasse*		281
Axungia. See Adeps		31
Bael Fruit		75
Balneum Alkalinum		322
,, *Sulphuretum*		274
Balsam of Peru	10 to 15 minims	73
,, ,, Tolu		74
,, ,, ,, Syrup	1 to 2 drms.	74
,, ,, ,, Tincture	15 to 60 minims	75
,, *Friar's*		79
,, *Gurjun*		73
,, *Traumatic*		79
Balsami Peruviani Unguentum		74
,, ,, ,, *Resinosum*		74
Balsamodendron Myrrha		242
Balsamum Canadense. See Terebinthina Canadensis		342
,, *Dipterocarpi*		73
,, Peruvianum	10 to 15 minims	73
,, Tolutanum	10 to 20 grs.	74
Baptisin		374
Barbadoes Aloes		36
Barbaloin		39
Barley		188
Barometer		61
Barosma betulina		86
,, *crenulata*		86
,, *serratifolia*		86
Bath of Acidum Nitrohydrochloricum dilutum		20
Battley's Liquor Opii Sedativus		253
Baume de Vie. See Decoct. Aloes Co.		37, 38
Bearberry leaves		350
Beaver		110
Beberinæ Sulphas	1 to 3 grs. tonic. 5 to 10 grs. antiperiodic	75
Bebeeru Bark		243
Beer Yeast		113
Belæ Fructus		75
,, Extractum Liquidum	1 to 2 drms.	76
Belladonna		76

Official Names in Roman; all others in Italics.

BE to BI	Dose.	Page
Belladonnæ *Chloroformum*		78
,, Emplastrum		78
,, Extractum	¼ to ½ gr.	77
,, Extractum Alcoholicum	1/16 to ¼ gr.	78
,, Folia		76
,, Linimentum		78
,, ,, *Comp.*		79
,, Radix		77
,, Succus	5 to 15 minims	77
,, *Suppositoria*		79
,, Tinctura	5 to 20 minims	77
,, Unguentum		78
Benzoas Sodicus		319
Benzoate d'Ammoniaque		45
Benzoate of Ammonium		45
,, Lithium		222
,, *Potash*		274
,, *de Soude*		319
Benzoated Lard		32
Benzoic Acid	5 to 15 grs.	7
Benzoin		79
,, *Flowers of*		7
,, *Lotion of*		80
Benzoini Lotio		80
Benzoini Tinctura composita	½ to 1 drm.	79
,, ,, *simplex*		79
Benzoinum	10 to 30 grs.	79
Beta-Naphthol		243
Betel Nut		63
Benzoyl, Hydrate of		7
Betula Alba		80
,, ,, *Oleum*		80
Beurre de Cacao		344
,, *de Muscade*		242
Bicarbonas Kalicus		275
,, *Natricus*		320
,, *Sodæ*		320
Bicarbonate of Potassium		275
,, Sodium		319
Bicarbonate de Soude		320
Bichloride of Methylene		121
Bichromate of Potassium		275
Bilis bovina depurata		159
Bimeconate of Morphia Solution		253
Birch, Common European		80
Bismuth		80
,, Carbonate of		80
,, Citrate of		81
,, *Magistery of*		83
,, *Nitrate of*		82

BI to BO	Dose.	Page
Bismuth, Oxide of		84
„ *Oxynitrate of*		83
„ Subnitrate of		83
„ *White*		83
Bismuthi Carbonas	5 to 20 grs.	80
„ Citras	2 to 5 grs.	81
„ et Ammonii Citras	2 to 5 grs.	82
„ et Amm. Citratis Liquor	½ to 1 drm.	82
„ *Lotio*		84
„ *Nitras*		82
„ Oxidum	5 to 15 grs.	84
„ Subnitras	5 to 20 grs.	83
„ Trochisci . . . 2 grs. each.	1 to 6 loz.	83
„ *Unguentum*		84
Bismuthum		80
„ *Nitricum præcipitatum*		83
„ Purificatum		80
„ *Sub-nitricum*		83
Bitartras Potassæ depuratus		283
„ *Kalicus*		283
Bitter Almond		50
„ „ *Mixture*		50
„ „ *Oil*		50
„ Orange Peel		70
Bittersweet		150
Black Antimony		58
„ *Catechu*		112
„ *Drop* (*Cook*)		253
„ Oxide of Manganese		229
„ Pepper		264
„ Pitch		266
„ *Snake Root*		31
„ *Wash. See* Lotio Hydrarg. Nigra		197
Bladder-Wrack		174
Blistering Collodion		103
„ Liquid		104
„ Paper		103
„ *Tissue, Brown's*		104
Blue Gum Tree. See Eucalyptus		155
Bois de Campêche		187
Boldine		84
Boldo		84
„ *Tinctura*		84
Bone Ash		253
„ Black		106
Boracic Acid		8
Boracis *Gargarisma*		85
„ Glycerinum	½ to 1½ drms.	85
„ *Lotio*		86
„ Mel		85

Official Names in Roman; all others in Italics.

BO to CA	Dose.	Page
Boracis Tinct. et Myrrhæ		86
„ *Unguentum*		86
Borax	5 to 30 grs.	85
Boric Acid	5 to 10 grs.	8
,, ,, *Lint*		8
,, ,, *Lotion*		8
,, ,, Ointment		8
Bos Taurus		214
Bougies, Medicated		373
Bran Poultice		158
Brandish's Alkaline Solution		273
Brandy		330
„ *Mixture*		331
Brassica Alba		313
„ *Nigra*		313
Brayera		147
Bread Crumb		234
Brecknell's Pure Yellow Soap		305
Brockedon's compressed Pills		275
Brometum Kalicum		276
Bromide of Ammonium	5 to 20 grs.	46
,, „ *Lozenges*		46
,, *Mercury*		191
„ Potassium	20 to 60 grs.	275
,, Sodium		321
Bromine		86
Bromum		86
Bromure de Potassium		276
„ *Sodium*		321
Bromuretum Potassii		276
Broom, Decoction		310
„ Juice		310
,, Tops		309
Brown's Blistering Tissue		104
Buchu Folia	20 to 40 grs.	86
„ Infusum	1 to 4 oz.	87
„ Tinctura	1 to 4 drms.	87
Bulbus Scillæ		308
Burgundy Pitch		265
Burnett's Solution		356
Busserole		350
Butter of Cacao, or Oil of Theobroma		344
Butyl-Chloral Hydras	1 to 2 grs.	87
,, ,, *Mistura*		87
,, „ *Pilula*		87
Buxine		243
Buxus Sempervirens		243
Byne		88
Bynes Extractum		88
Cabbage Rose Petals		296

CA	Dose.	Page
Cacao Butter		344
Cachou Tinctura		112
Cadmii Iodidi Unguentum		88
„ *Iodidum*		88
„ *Sulphas*		89
Caffeina	1 to 5 grs.	89
Caffeinæ Citras	2 to 10 grs.	89
Caffeine		89
„ Citrate		89
Cajuputi Oleum	1 to 3 minims	90
„ Spiritus	50 to 100 minims	90
Calabar Bean	1 to 4 grs.	260
„ Discs		261
„ Extract	$\frac{1}{16}$ to $\frac{1}{4}$ gr.	261
„ *Tincture*		261
Calamina Præparata		90
Calaminæ Unguentum		91
Calamine		90
Calcaria Caustica Soluta		93
„ *Chlorata*		95
„ *Hyperphosphorosa*		94
„ *Hypochlorosa*		95
„ „ *Soluta*		95
„ *Phosphorica*		94
Calcariæ Aqua		93
Calcii Carbonas præcipitata	10 to 60 grs.	91
„ Chloridi Liquor		92
„ Chloridum		91
„ Hydras		92
„ *Hypochloris*		95
„ Hypophosphis	5 to 10 grs.	93
„ Phosphas	10 to 40 grs.	94
„ *Phosphas præcipitatus*		94
„ Sulphas		94
„ Sulphidum		96
Calcis Hypophosphitis Syrupus		94
„ *Lactophosphatis Syrupus*		18
„ Linimentum		92
„ Liquor	½ to 2 oz.	92
„ „ Chlorinatæ	20 to 40 minims	95
„ „ Saccharatus	15 to 60 minims	93
Calcium		91
„ Carbonate of, precipitated		91
„ *Chloratum Siccum*		92
„ „ *Fusum*		92
„ Chloride of		91
„ Hydrate of		92
„ *Hypochlorosum*		95
„ Hypophosphite of		93
„ Phosphate of		94

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CA	Dose.	Page
Calcium *Phosphoricum*		94
,, Sulphate of		94
,, Sulphide of		96
Calefaciens Emplastrum		103
Calendula		96
,, *Tinctura*		96
Calomel		196
Calomelas. See Hydr. Subchloridum		196
Calumba Root		96
Calumbæ Extractum	2 to 10 grs.	97
,, *Extractum Fluidum*		97
,, Infusum	1 to 2 oz.	97
,, Radix	5 to 20 grs.	96
,, Tinctura	½ to 2 drms.	97
Calx		94
,, *Chlorata*		95
,, Chlorinata		95
,, *Hydrargyri Alba*		198
,, Sulphurata	$\frac{1}{10}$ to 1 gr.	96
Cambogia	1 to 5 grs.	97
Cambogiæ Pilula composita	5 to 10 grs.	98
Camomille		55
Camphor		98
,, *Balls*		100
,, *Monobromated*		100
,, *Phénique*		11
Camphora	1 to 10 grs.	98
,, *c. Cretâ*		100
,, *Monobromata*		100
Camphoræ Aqua	1 to 2 oz.	99
,, *Ceratum*		100
,, *Essentia*		100
,, Linimentum		99
,, ,, compositum		99
,, *Mistura*		99
,, Spiritus	10 to 30 minims	100
,, ,, *Fortior*		100
,, Tinct. composita	15 to 60 minims	100
,, *Unguentum*		100
Camphorated Oil		99
,, *Vinegar*		100
Camphoratum Oleum		99
Canella Alba		101
Canada Balsam. *See* Terebinthina Canadense		342
,, *Fleabane, Oil of*		155
Canarium Commune		152
Canellæ Cortex		101
Cannelle		128
Cannabis Indica		101
,, Indicæ Extractum	¼ to 1 grain	102

Official Names in Roman; all others in Italics.

CA	Dose.	Page
Cannabis Indicæ Tinctura	5 to 20 minims	102
,, *Sativa*		101
Cantharides		102
Cantharidine		102
Cantharis		102
,, *Vesicatoria*		102
Cantharidis Acetum		103
,, Charta Epispastica		103
,, Emplastrum		103
,, ,, Calefaciens		103
,, *Linimentum*		104
,, Liquor Epispasticus		104
,, Tinctura	5 to 20 minims	104
,, Unguentum		104
Capsici Fructus	½ to 1 gr.	104
,, *Emplastrum*		105
,, *Gargarisma*		105
,, *Linimentum*		105
,, *Oleo-resina*		105
,, Tinctura	10 to 20 minims	105
,, ,, *Conc. (Turnbull's)*		105
Capsicin		105
Capsicum fastigiatum		104
Capsulæ Olei Ricini		296
,, *Olei Santali*		302
,, *Terebene*		342
Caraway fruit		108
Carbo Animalis		106
,, ,, purificatus	20 to 60 grs.	106
,, Ligni	20 to 60 grs.	106
Carbolic Acid	1 to 3 grs.	9
,, ,, *Crude*		11
,, ,, *Dressings*		12
,, ,, *Gargle*		10
,, ,, *Gauze*		12
,, ,, Glycerine of	5 to 10 minims	11
,, ,, *Inhalation*		10
,, ,, *Injection*		10
,, ,, ,, *hypodermic*		10
,, ,, Liquified		10
,, ,, *Lotion*		10, 11
,, ,, Ointment		11
,, ,, *Plaster*		12
,, ,, *Putty*		12
,, ,, *Soap*		305
,, ,, *Spray*		10
,, ,, Suppositories with Soap		11
,, ,, *Wool*		12
Carbolized Oil		10
Carbon, Tetrachloride of		121

Official Names in Roman; all others in Italics.

CA	Dose.	Page
Carbonas Ferri		168
,, *Kalicus*		277
Carbonate de Plomb		268
,, *Potasse Pur*		277
Carbonate of Ammonia		46
,, Bismuth		80
,, Calcium, precipitated	10 to 60 grs	91
,, Iron, saccharated		161
,, Lead		268
,, *Lime, precipitated*		91
,, Lithium		222
,, Magnesium		227
,, Potassium		276
,, Sodium		321
,, Zinc		355
Carbonis Cataplasma		106
,, *Liquor Detergens*		141
Cardamomi Semina	5 to 20 grs.	107
,, Tinctura composita	½ to 2 drms.	107
,, ,, *Simplex*		107
Cardamoms	5 to 20 grs.	107
Carmine		131
Carnis Extractum		108
Carrageen		116
Carui Aqua	1 to 2 oz.	108
,, Fructus		108
,, Oleum	1 to 4 minims	108
Carum Carui		108
Carvi Aetheroleum		108
Caryophylli Infusum	1 to 2 oz.	109
,, Oleum	1 to 4 minims	109
Caryophyllorum Essentia		109
Caryophyllum	5 to 10 grs.	108
Cascara Sagrada		292
Cascaræ Sagradæ Extractum	2 to 8 grs.	293
,, ,, ,, Liquidum	½ to 2 drms.	293
Cascarilla Bark		109
Cascarillæ Cortex	10 to 30 grs.	109
,, Infusum	1 to 2 oz.	109
,, Tinctura	½ to 2 drms.	109
Cassia		310
,, *Acutifolia*		311
,, *Angustifolia*		311
,, *Fistula*		110
,, Pulp		110
Cassiæ Pulpa	Laxative, 60 to 120 grs. Purgative, 1 to 2 oz.	110
Castile Soap		304
Castor Fiber		110
Castor Oil		295
Castorei Tinctura		110

Official Names in Roman; all others in Italics.

CA to CH	Dose.	Page
Castoreum		110
Cataplasma *Aluminis*		41
„ Carbonis		107
„ Conii		136
„ Fermenti		114
„ Lini		219
„ *Micæ Panis*		234
„ Sinapis		314
„ Sodæ Chlorinatæ		318
Cataplasmata (*group*)		110
Cataplasme Rubéfiant		314
Catechu	10 to 30 grs.	111
„ *Black*		112
„ Infusum	1 to 2 oz.	111
„ *Nigrum*		112
„ *Pallidum*		111
„ *Pegu*		112
„ Pulvis compositus	20 to 40 grs.	111
„ Tinctura	½ to 2 drms.	111
„ Trochisci . . . 1 gr. in each.	1 to 6 loz.	112
Caulophyllin		374
Caustic *Points*		65
„ Potash		272
„ Soda		316
Cephaëlis Ipecacuanha		207
Cera alba		112
„ flava		113
Ceræ Unguentum		113
Cérat Simple		113
„ *Saturné*		271
Ceratum Camphoræ		100
„ *Cetacei*		115
„ *Plumbi Acetatis*		267
Cereum Unguentum		113
Cerevisiæ Fermentum	½ to 1 oz.	113
„ Fermenti Cataplasma		114
Cerii Oxalas	B. P. Dose 1 to 2 grs. Dose 5 to 10 grs.	114
Cerium, Oxalate of		114
Cerussa		268
Cetacei *Ceratum*		115
„ *Mistura*		115
„ Unguentum		115
Cetaceum	20 to 60 grs.	114
Cetraria		115
„ *Islandica*		115
Cetrariæ Decoctum	1 to 4 oz.	116
Cevadilla		298
Cevadille		298
Chalk		141
„ Prepared		141

Official Names in Roman; all others in Italics.

CH	Dose.	Page
Chamomile Flowers		55
Chamomillæ Oleum Citratum		56
Charbon Végétal		107
Charcoal		106
,, Animal		106
,, ,, Purified	20 to 60 grs.	106
,, *Biscuits*		107
,, *Capsules*		107
,, *Cautery (Getchell's)*		107
,, *Respirators*		107
,, Wood		106
Charpie Carbonifères		106
Charta *Cantharidis*		103
,, Epispastica		103
,, *Nitrata*		281
,, Sinapis		314
Chaulmugra Oil		186
Chelsea Pensioner		336
Chemical Food (Parrish's)		169
Cherry-laurel leaves		216
Cheyne's Bougies		205
Chien-dent		348
China Calisaya		123
,, *Clay*		212
,, *Flava*		123
,, *Fusca*		125
,, *Fuscus*		123
,, *Ruber*		123
Chinæ Calisayæ Tinctura		126
,, *Infusum Frigide Paratum*		126
,, *Rubræ Tinctura*		126
,, *Tinctura*		126
,, ,, *Comp.*		126
,, ,, *Flav.*		126
Chininum Ferro Citricum		164
,, *Hydrochloratum*		287
,, *Hydrochloricum*		287
,, *Sulphuricum*		290
Chirata		116
Chiratæ Infusum	1 to 2 oz.	116
,, Tinctura	½ to 2 drms.	117
Chiretta		116
Chloral		117
Chloral Hydras	5 to 30 grs.	117
,, *Hydraté*		117
,, Syrup	½ to 2 drms.	118
Chlorali Hydras		117
Chloralum Hydratum		117
,, ,, *Crystallisatum*		117
Chloras Kalicus		277

Official Names in Roman; all others in Italics.

CH	Dose.	Page
Chloras Potassæ		277
Chlor-alum		41
Chlorate de Potasse		277
,, of Potassium		277
Chlore Dissous		118
Chloretum Amido-hydrargyricum		198
,, *Chinicum*		287
,, *Hydrargyrosum*		195, 197
,, *Zincicum*		356
Chlorhydrate de Morphine		238
Chlorhydric Acid		15
Chlori Aqua		118
,, Liquor	10 to 20 minims	118
,, Vapor. *Vide* Calx Chlorinata		96
Chloric Ether		120
Chloride of Aluminium		41
,, ,, Ammonium		48
,, ,, ,, *Draught*		48
,, ,, ,, *Lotion*		48
,, ,, ,, *Lozenges*		48
,, ,, Calcium		91
,, ,, Sodium		322
,, ,, Zinc		355
,, ,, ,, *points*		356
Chlorinated Lime		95
Chlorine, Solution of	10 to 20 minims	118
Chloroform		119
Chloroformi Aqua	½ to 2 oz.	120
,, et Morphinæ Tinctura	5 to 10 minims	120
,, Linimentum		120
,, *Liquor Camphoratus*		121
,, ,, *compositus*		121
,, *Mistura c. Ammoniâ*		121
,, Spiritus	10 to 60 minims	120
,, Tinct. comp.	20 to 60 minims	120
,, *Unguentum*		121
,, *Vapor*		121
Chloroformum	1 to 5 minims	119
,, *Aconiti*		30
,, *Belladonnæ*		78
,, *Hyoscyami*		201
,, *Purificatum*		120
,, *Purum*		120
Chlorohydrate de Quinine Basique		287
Chlorum Solutum		118
Chlorure de Chaux		95
,, *Mercurique*		195
,, *Mercureux Precipité*		197
,, *Zinc*		356

Official Names in Roman; all others in Italics.

CH to CI	Dose.	Page
Chloruretum Zinci		356
Cholera Mixture		142
Chondodendron tomentosum		257
Christison's Pill		135
Chromic Acid		12
„ „ Solution		13
„ Anhydride		12
Chrysarobin		121
Chrysarobini Unguentum		121
„ „ *Purificata*		122
Chrysarobinum		121
Chrysophanic Acid		13
Cicutæ Extractum		136
„ *Tinctura*		137
Cicutine		137
Cimicifuga		31, 122
„ *Racemosa*		122
Cimicifugæ Extractum Liquidum	3 to 30 minims	122
„ Rhizoma		122
„ Tinctura	15 to 60 minims	122
Cimicifugin		374
Cimolite		40
Cinchona		122
„ *Calisaya*		122
„ *Fuscus*		125
„ *Government Febrifuge*		123
„ *Lancifolia*		122
„ *Officinalis*		122
„ *Succirubra*		122, 123
Cinchonæ Cortex		122
„ Decoctum	1 to 2 oz.	124
„ Extractum liquidum	5 to 10 minims	125
„ Infusum Acidum	1 to 2 oz.	126
„ Rubræ Cortex		123
„ Tinctura	½ to 2 drms.	126
„ „ *Huxham's*		126
„ „ composita	½ to 2 drms.	126
Cinchonidinæ Sulphas	1 to 10 grs.	127
Cinchonidine, Sulphate of	1 to 10 grs.	127
Cinchonine, Sulphate of	1 to 10 grs.	127
Cinchoninæ Sulphas	1 to 10 grs.	127
Cinnamon Bark		128
Cinnamomi Aqua	1 to 2 oz.	128
„ Cortex	10 to 20 grs.	128
„ Oleum	1 to 4 minims	128
„ Pulvis compositus	3 to 10 grs.	128
„ Spiritus	1 to 2 drms.	128
„ Tinctura	½ to 2 drms.	128
Cinnamomum Zeylanicum		128
„ *Camphora*		98

Official Names in Roman; all others in Italics.

CI to CO	Dose.	Page
Cire Blanche		112
,, *Jaune*		113
Cissampelos Pareira		243
Citrate de Fer Ammoniacal		163
Citrate of Bismuth		81
,, Caffeine		89
,, Iron and Ammonium		163
,, ,, Quinine		163
,, Lithium		222
,, Potassium		277
Citric Acid		13
Citrullus Colocynthis		134
Citrus Aurantium		72
,, *Bergamia*		13
,, *Limonum*		217
,, *Vulgaris*		70
Clarified Honey		232
Claviceps Purpurea		153
Clay, China		212
,, *Porcelain*		212
Clove		108
Clover		348
Clutton's Febrifuge Spirit		34
Coca		129
Cocæ Extractum Liquidum	½ to 2 drms.	129
Cocainæ Hydrochloras	⅕ to 1 gr.	129
,, Lamellæ		130
Cocaine		130
,, Hydrochlorate of		129
Cocci Tinctura	30 to 90 minims	130
Coccionella		130
Coccus		130
Coccus Cacti		130
Cochineal		130
Cochenille		130
Cochlearia Armoracia		66
Cod Liver Oil		239
,, ,, ,, *Emulsion*		240
Codeina	¼ to 2 grs.	131
Codeinæ Syrupus		131
Codeine		131
,, *Pastilles*		131
Colchici Cormus	2 to 8 grs.	131
,, Extractum	½ to 2 grs.	132
,, ,, Aceticum	⅓ to 2 grs.	132
,, *Mistura*		132, 133
,, ,, *Aperiens*		133
,, Semina		133
,, Seminum Tinctura	10 to 30 minims	133
,, *Tinctura composita*		

Official Names in Roman; all others in Italics.

CO	Dose.	Page
Colchici Tinctura Florum		133
,, Vinum	10 to 30 minims	132
,, ,, *Seminum*		133
Colchicum autumnale		131
Cold Cream		113
Collodion		133
,, Blistering		103
,, *Elastique*		134
,, Flexible		133
,, *Hæmostatic*		134
Collodium		133
,, *Elasticum*		134
,, Flexile		133
,, *Salicylicum*		24
,, Vesicans		103
Colloid Styptic		134
Collyrium Ammoniæ Acetatis		45
,, *Cupri Sulph*		146
,, *Hydrargyri*		196
Colocynthidis Extractum compositum	2 to 5 grs.	134
,, Pilula composita	5 to 10 grs.	135
,, ,, et Hyoscyami	5 to 10 grs.	135
,, Pulpa	2 to 8 grs.	134
,, *Tinctura*		135
Colocynth Pulp		134
Colophonium		291
Coloquinte		134
Come's Frères Arsenical Paste		7
Comfrey Root		338
Common Salt		322
,, *Marigold*		96
Concombre Sauvage		150
Condy's Fluid		282
Confectio *Amygdalæ*. *See* Pulv. Amygd. Comp.		51
,, *Aromatica* (Pulv. Cretæ Arom.). *See* Pulvis Cretæ Aromaticus		142
,, Opii	5 to 20 grs.	250
,, Piperis	60 to 120 grs.	265
,, Rosæ Caninæ	1 drm.	296
,, ,, Gallicæ	½ to 1 drm.	297
,, *Rutæ*		298
,, Scammonii	10 to 30 grs.	308
,, Sennæ	60 to 120 grs.	311
,, Sulphuris	1 to 2 drms.	336
,, Terebinthinæ	1 to 4 drms.	343
Confectiones (group)		135
Conii *Abstractum*		136
,, Cataplasma		136
,, Extractum	2 to 8 grs.	136
,, Folia	2 to 8 grs.	136
,, Fructus		137

Official Names in Roman; all others in Italics.

CO to CR	Dose.	Page
Conii *Liniment*		137
,, *Mist. c. Hyoscyamo*		137
,, Pilula composita	5 to 10 grs.	136
,, Succus	30 to 60 minims	136
,, Tinctura	½ to 1 drm.	137
Conina Hydrobromas		137
Coninæ Vapor		137
Conine		137
,, *Hydrobromate of*		137
Conium maculatum		136, 137
Conserva Cynorrhodi		296
Consoude		338
Convallaria		138
Convallariæ Extractum		138
,, *Majalis*		138
Convolvulus Scammonia		307
Copaiba	20 to 60 minims	138
Copaibæ Mistura		139
,, Oleum	5 to 20 minims	139
,, *Pilula*		139
,, *Resina*		139
Copahu		138
Copaifera Langsdorffii		138
Copaiva		138
,, Oil of		139
Copper		145
,, Nitrate of		145
,, Sulphate of		145
Coquelicot		295
Coriander Fruit		139
Coriandri Fructus	20 to 60 grs.	139
,, Oleum	1 to 4 minims	139
Coriandrum Sativum		139
Cornin		374
Corrosive Sublimate		195
Corydalin		374
Cotton, *Medicated pledgets of*		373
,, Wool		182
,, ,, *Respirators of*		182
Cough Mixture		51
Court Plaster		201
Cousso		147
Crayons de Tannin		28
,, *d'Azotate d'Argent Mitigé*		65
Cream of Tartar. See Potassii Tartras		282
,, ,, *Soluble*		283
Creasote		140
Creasoti *Aqua*		141
,, Mistura	1 to 2 oz.	141
,, ,, *c. Opio*		141

Official Names in Roman; all others in Italics.

CR to CY	Dose.	Page
Creasoti Unguentum		141
,, Vapor		141
Creasotum	1 to 3 minims	140
Creeping Couch Grass		348
Cremor Frigidus (Cold Cream)		113
,, *Lithargyri*		271
Creta		141
,, Præparata	10 to 60 grs.	141
Cretæ Mistura	1 to 2 oz.	142
,, ,, *c. Opio*		142
,, Pulvis Aromaticus	10 to 60 grs.	142
,, ,, ,, cum Opio	10 to 40 grs.	142
,, *Unguentum*		142
Croci Tinctura	½ to 2 drms.	143
Crocus		143
,, *of Mars*		168
,, *Sativus*		143
Croton Eluteria		109
Croton Oil		143
,, ,, *Pencils*		144
,, *Tiglium*		143
Croton-chloral Hydrate		87
Crotonis Linimentum		144
,, Oleum	⅓ to 1 minim	143
Cryptopia		249
Cubeba	1 to 2 drms.	144
Cubebæ Oleo-Resina		144
,, Oleum	5 to 20 minims	145
,, Tinctura	1 to 2 drms.	145
Cucumber Squirting		150
Cupri Nitras		145
,, *Pilula Comp.*		146
,, Sulphas	¼ gr. gradually increased to 2 grs.—10 grs. an emetic	145
,, *Sulphatis Collyrium*		146
,, ,, *Haustus (Emeticus)*		146
,, ,, *Injectio*		146
,, ,, *Lotio*		146
Cuprum		145
Curare		146
Curarina		147
Curd Soap		303
Cuspariæ Cortex	10 to 40 grs.	147
,, Infusum	1 to 2 oz.	147
Cusparine		147
Cusso	¼ to ½ oz.	147
,, Infusum	4 to 8 oz.	147
Cutch		112
Cyanhydric Acid		16
Cyanide of Potassium		278
Cydonia Vulgaris		148

Official Names in Roman; all others in Italics.

CY to DI	Dose.	Page
Cydonii Decoctum		148
,, *Mucilago*		148
Cydonium		148
Cynips Gallæ-tinctoriæ		175
Cynorrhodi Conserva		296
Cynorrhodon		296
Cypripedin		374
Cytisus scoparius		309
Damson, Mountain		313
Dandelion Root		341
Daphne Gnidium		234
,, *Laureola*		233
,, *Mezereum*		233
Datura Stramonium		332
Daturine		332
Daturinæ Guttæ		333
Deadly Nightshade		76
Decocta (*group*)		148
Decoctum Aloes compositum	½ oz. to 2 oz.	37, 38
,, *Amyli*		53
,, Cetrariæ	1 to 4 oz.	116
,, Cinchonæ	1 to 2 oz.	124
,, *Cydonii*		148
,, *Gallæ*		176
,, Granati Radicis	1 to 2 oz.	183
,, *Gummi Rubri*		185
,, Hæmatoxyli	1 to 2 oz.	187
,, Hordei	1 to 2 oz.	188
,, Papaveris		255
,, ,, *concentratum*		256
,, Pareiræ	1 to 2 oz.	258
,, Quercus	1 to 2 oz.	287
,, ,, *aluminatum*		287
,, *Ricini Foliorum*		296
,, Sarsæ	10 to 20 oz. } per diem	306
,, ,, compositum	10 to 20 oz. }	
,, Scoparii	2 to 4 oz.	310
,, Taraxaci	2 to 4 oz.	341
,, *Tritici Repentis*		348
Delphinium Staphisagria		332
Deutoioduretum Hydrargyri		191
Dewar's Spray Producer		26
De Valangin's Solution		7
Dextrotartaric Acid		28
Dialysed Iron		166
Dichopsis Gutta		185
Digitalin		148
Digitalinum		148
Digitalis Folia	½ to 2 grs.	149

Official Names in Roman; all others in Italics.

DI to EL	Dose.	Page
Digitalis Infusum	$\frac{1}{4}$ to $\frac{1}{2}$ oz.	149
„ *Pilula Comp.*		149
„ *purpurea*		149
„ *Succus*		149
„ Tinctura	10 to 30 minims	149
Dill Fruit		54
Dimethyloxychinizin		60
Diosma. See Buchu		86
Dipterocarpus Lævis		73
Distilled Water		62
Dog-Rose Fruit		296
Dolomite		226
Donovan's Solution (Arsenic)		68
Dorema Ammoniacum		48
Douce-amère		150
Dover's Powder		208
Duboisia Myoporoides		150
Duboisine, Sulphate of		150
Dugong Oil		150
Dulcamara		150
Dulcamaræ Infusum		150
Dulcamaræ Extractum Fluidum		150
Easton's Syrup		169
Eau Camphrée		99
„ *de Cannelle*		128
„ *de Chaux*		93
„ *de Goudron*		266
„ *de Laitue*		215
„ *de Luce*		44
„ *de Sureau*		302
„ *distillée de Fleur d'Oranger*		72
Ecbalii Fructus		150
Ecbalium Elaterium		150
Eclectic Remedies		374
Egg Albumen		253
„ Yolk of		254
Elaterii Extractum		150
Elaterii Pilula		151
Elaterin		151
Elaterini Pulvis Compositus	$\frac{1}{2}$ to 5 grs.	152
Elaterinum	$\frac{1}{40}$ to $\frac{1}{10}$ gr.	151
Elaterium	$\frac{1}{16}$ to $\frac{1}{2}$ gr.	150
Elder Flowers		301
Electuarium Sennæ. See Confectio Sennæ		311
Elemi		152
„ Unguentum		152
Elettaria Cardamomum		107
Elixir e Succo Glycyrrhizæ		181
„ *Paregorique*		100

Official Names in Roman; all others in Italics.

EL to ER	Dose.	Page
Elixir Pectorale		181
,, *of Vitriol*		25
,, ,, *Mynsicht's*		26
Elixirium Paregoricum		109
Emetine		207
Emplastra (group)		152
Emplastrum *Acidi Carbolici*		12
,, Ammoniaci cum Hydrargyro		189
,, Belladonnæ		78
,, Calefaciens		103
,, Cantharidis		103
,, *Cantharidum Perpetuum*		104
,, *Capsici*		105
,, *Citrinum*		291
,, *Diachylon Simplex*		269
,, Ferri		168
,, Galbani		175
,, Hydrargyri		189
,, *Lithargyri. See* Empl. Plumbi		269
,, Opii		250
,, Picis		265
,, ,, *cum Cantharide*		103
,, Plumbi		269
,, ,, Iodidi		268
,, Resinæ		291
,, *Resinæ Pini*		291
,, *Roborans. See* Empl. Ferri		168
,, *Saponatum*		304
,, Saponis		304
,, ,, Fuscum		304
,, *Thuris. See* Empl. Ferri		168
Emplâtre *de Canet*		168
Emulsio		51
,, *Amygdalæ*		51
,, *Ricini Olei*		296
Enema Aloes		36, 38
,, Asafœtidæ		69
,, *Lini*		220
,, Magnesii Sulphatis		229
,, Opii		250
,, *Rutæ*		298
,, Terebinthinæ		343
Enemata (group)		153
Epsom Salt		228
Ergot de Seigle		154
Ergota	20 to 30 grs.	153
Ergotæ Extractum liquidum	10 to 60 minims	154
,, Infusum	1 to 2 oz.	154
,, Tinctura	5 to 30 minims	154
Ergotine		154

Official Names in Roman; all others in Italics.

ER to ES	Dose.	Page
Ergotini Injectio Hypodermica	3 to 10 minims	154
Ergotinine		155
Ergotinum	2 to 5 grs.	154
Erigerontis Canadensis Oleum		155
Erythroxylon Coca		129
Eserine		261
,, *Drops for the eye*		262
,, *Salicylate of*		262
,, *Sulphate of*		262
Esprit de Nitre Dulcifié		329
Essence de Térébenthine		343
Essence of Peppermint		232
Essentia Anisi	10 to 20 minims	54, 55
,, *Cajuputi*		90
,, *Camphoræ*		100
,, *Caryophyllorum*		109
,, *Cinnamoni*		128
,, *Citri*		218
,, Menthæ Piperitæ	10 to 20 minims	232
,, *Rosæ*		298
,, *Rosmarini*		298
,, *Rutæ*		298
,, *Sabinæ*		298
,, *Sinapis*		314
,, *Terebinthinæ*		343
,, *Zingiberis*		359
Ether		32
,, Acetic		34
,, *Inhaler*		33
,, Pure		34
,, *Sulphuric*		32
Eucalypti Oleum		155
Eucalyptol		155
Eucalyptus Amygdalina		155
,, *Globulus*		155
,, Oil of		155
,, *Rostrata*		185
Eugenia Caryophyllata		108
Eulophia		301
Euonymi Extractum		156
Euonymin		156
Euonymus		155
,, *Atropurpureus*		155
Extract of Malt		88
,, *Meat*		108
Extracta (group)		156
Extractum Aconiti	1 to 2 grs.	29
,, *Aconiti Rad. Alcoholic*		30
,, Aloes Barbadensis	1 to 3 grs.	36
,, ,, Socotrinæ	1 to 3 grs.	38

Official Names in Roman; all others in Italics.

EX	Dose.	Page
Extractum Anthemidis	2 to 10 grs.	55
,, *Arnicæ Radicis Fluidum*		67
,, Belæ liquidum	1 to 2 drms.	76
,, Belladonnæ	¼ to ½ gr.	77
,, ,, Alcoholicum	1/16 to ¼ gr.	78
,, *Bynes*		88
,, Calumbæ	2 to 10 grs.	97
,, ,, *Fluidum*		97
,, Cannabis Indicæ	¼ to 1 gr.	102
,, *Carnis*		108
,, Cascaræ Sagradæ	2 to 8 grs.	293
,, ,, ,, Liquidum	½ to 2 drms.	293
,, Cimicifugæ Liquidum		122
,, Cinchonæ liquidum	5 to 10 minims	125
,, Cocæ Liquidum		129
,, Colchici	½ to 2 grs.	132
,, ,, Aceticum	½ to 2 grs.	132
,, ,, *Alcoholicum*		132
,, ,, *Fluidum*		132
,, *Colocynthidis*		135
,, ,, compositum	2 to 5 grs.	134
,, Conii	2 to 8 grs.	136
,, *Convallariæ*		138
,, *Dulcamaræ Fluidum*		150
,, *Elaterii*		150
,, *Ergotæ*		154
,, ,, liquidum	10 to 60 minims	154
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,, *Filicis*		174
,, ,, liquidum	60 to 80 minims	174
,, ,, *Maris*		174
,, ,, ,, *Æthereum*		174
,, *Fuci Vesiculosi Liquidum*		174
,, Gelsemii Alcoholicum	½ to 2 grs.	177
,, ,, *Fluidum*		177
,, Gentianæ	2 to 10 grs.	178
,, ,, *Fluidum*		178
,, Glycyrrhizæ	½ to 1 drm.	181
,, ,, liquidum	1 drm.	181
,, *Gossypii Fluidum*		182
,, *Guaranæ Fluidum*		185
,, *Gummi Rubri Liquidum*		185
,, Hæmatoxyli	10 to 30 grs.	187
,, *Hamamelis Fluidum*		187
,, *Hellebori Nigri*		187
,, *Hydrastis Fluidum*		199
,, Hyoscyami	3 to 6 grs.	200
,, *Ignatiæ Amaræ*		202
,, Jaborandi	2 to 10 grs.	269
,, Jalapæ	5 to 15 grs.	210

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„ Lactucæ	5 to 10 grs.	215
„ *Liquiritiæ*		181
„ Lupuli	5 to 10 grs.	225
„ *Lupulinæ*		224
„ *Malti*		88
„ *Mezerei*		234
„ „ Ethereum		234
„ „ *Fluidum*		234
„ Nucis Vomicæ	⅓ to 1 gr.	244
„ „ *Fluidum*		245
„ Opii	½ to 1 gr.	250
„ „ Liquidum	10 to 40 minims	251
„ Papaveris	2 to 5 grs.	255
„ „ *Liquidum*		255
„ Pareiræ	10 to 30 grs.	258
„ „ Liquidum	½ to 2 drms.	258
„ Physostigmatis	1/16 to ¼ gr.	261
„ Quassiæ	3 to 5 grs.	286
„ Rhamni Frangulæ	15 to 60 grs.	292
„ „ „ Liquidum	1 to 4 drms.	292
„ Rhei	3 to 6 grs.	293
„ „ *Comp.*		295
„ Sarsæ liquidum	1 to 4 drms.	306
„ „ *comp. liquidum*		306
„ *Secalis Cornuti. See* Ergot		154
„ Stramonii	¼ gr.	333
„ *Strychni Aquosum*		245
„ „ *Spirituosum*		245
„ Taraxaci	5 to 15 grs.	341
„ „ Liquidum	¼ to 2 drms.	342
„ *Vincæ Majoris Liquidum*		354
Extrait de Casse		110
„ *Ethéré de Garou*		234
„ *de Fiel de Bœuf*		159
„ *de Fougère Mâle*		174
„ *de Réglisse*		181
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Farina Tritici		158
Fel Bovinum Depuratum		159
„ „ Purificatum	5 to 10 grs.	158
„ *Bovis Purificatum*		159
„ *Tauri Depuratum*		159
„ „ „ *Siccum*		159
„ „ *inspissatum*		159
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Ferri Acetatis Liquor	5 to 30 minims	160
„ „ „ Fortior		160

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,, *Acetici Ætherea Tinctura*		160
,, Arsenias	$\frac{1}{16}$ to $\frac{1}{4}$ gr.	161
,, *Bromidi Solutio*		161
,, ,, *Syrupus*		161
,, *Carbonas*		168
,, ,, saccharata	5 to 20 grs.	161
,, Carbonatis Pilula	5 to 20 grs.	162
,, *Chlorati Tinctura*		166
,, *Chloridi Tinctura*		166
,, *Chloroxydi Liquor*		167
,, *Citras*		163
,, Citratis Vinum	1 to 4 drms.	163
,, Emplastrum		168
,, et Ammonii Citras	5 to 10 grs.	163
,, ,, ,, *Citratis Haustus*		163
,, ,, ,, *Sulphas*		41
,, ,, *Potassii Tartras*		173
,, ,, Quininæ Citras	5 to 10 grs.	163
,, ,, ,, *Mist. Efferv.*		164
,, *Iodidi Liquor*		165
,, Iodidi Pilula	3 to 8 grs.	164
,, ,, Syrupus	20 to 60 minims	164
,, Iodidum		164
,, Liquor Dialysatus		166
,, Mistura Comp.	1 to 2 oz.	162
,, ,, Aromatica	1 to 2 oz.	159
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,, *Oxydati Dialysati Liquor*		167
,, *Oxychlorati Liquor*		167
,, *Oxidum Rubrum*		168
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,, ,, ,, fortior		165
,, ,, Tinct.	10 to 30 minims	166
,, Pernitratis Liquor	10 to 40 minims	167
,, Peroxidum Hydratum	5 to 30 grs.	168
,, Persulphatis Liquor		170
,, Phosphas	5 to 10 grs.	168
,, Phosphatis Syrupus	1 to 4 drms.	169
,, ,, *c. Manganesio Syrupus*		170
,, ,, *c. Quiniâ et Strychniâ Syrupus* (*Easton's*)		169
,, ,, *Syrupus comp.* (*Parrish*)		169
,, *Potassio-tartras. See* Ferrum Tartaratum		172
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,, ,, Trochisci, 1 gr. each	1 to 6 loz.	172
,, *Sesquichloridi Tinctura. See* Tinct. Ferri Perchlor.		166
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,, *Solutio Chloreti Spirituosa*		166
,, Sulphas	1 to 5 grs.	170

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,, ,, granulata	1 to 5 grs.	171
,, *Sulphatis Lotio*		171
,, Vinum	1 to 4 drms.	173
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,, *Carbonicum Saccharatum*		162
,, ,, *Oxydatum Ammoniatum*		163
,, *Iodatum Saccharatum*		164
,, *Oxydatum Hydratum*		168
,, Redactum	1 to 5 grs.	171
,, Tartaratum	5 to 10 grs.	172
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,, *Narthex*		68
,, *Rubricaulis*		175
,, *Scorodosma*		68
,, *Sumbul*		337
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,, *Mistura*		174
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Galla	10 to 20 grs.	175
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,, *Suppositoria*		176
,, Tinctura	½ to 2 drms.	176
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,, ,, c. Opio		176
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,, ,, Glycerine of	10 to 60 minims	14
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,, *Aluminis*		41
,, *Boracis*		85
,, *Capsici*		105
,, *Hydrargyri*		196
,, *Iodi*		207
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,, *Potassæ Chloratis*		277
,, ,, *Nitratis*		281
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,, *Atropine*		70
,, *Basis for Pessaries*		177
Gelsemii Extractum Alcoholicum	½ to 2 grs.	177
,, ,, *Fluidum*		177
,, Tinctura	5 to 20 minims	177
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Gelsemium	5 to 30 grs.	177
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„ „ *Fluidum*		178
„ Infusum comp.	1 to 2 oz.	178
„ *Mistura*		178
„ „ *Alkalina*		178
„ „ *et Sennæ*		178
„ Radix	10 to 40 grs.	177
„ *Tinctura*		178
„ „ composita	½ to 2 drms.	178
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„ *Cream for Chilblains*		180
„ „ *with Camphor*		180
„ *group*		180
„ *Ointment*		180
„ *Pessary*		180
„ *Soap*		305
„ *with Rose Water*		180
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„ Acidi Carbolici	5 to 10 minims	11
„ „ Gallici	10 to 60 minims	14
„ „ Tannici	10 to 40 minims	27
„ Aluminis		41
„ Amyli		53
„ Boracis		85
„ *Iodi*		207
„ Plumbi Subacetatis		270
„ *Tragacanthæ*		348
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„ Pulvis Compositus	60 grs.	181
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,, Tinct. Ammoniata	½ to 1 drm.	184
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„ *Bichloridum* (now Hydr. Perchloridum)		195
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„ *Bromidum Pessus*		191
„ *Chloridum*, former name for Calomel, now Subchloridum		196
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„ „ „ *Mistura*		191
„ „ „ *Solutio*		191
„ Iodidum Rubrum	$\frac{1}{16}$ to $\frac{1}{4}$ gr.	191
„ „ *Viride*	1 to 3 grs.	191
„ „ *Viridis Pilula*		192
„ „ „ *Unguentum*		192
„ Linimentum		190
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,, *Chloroformum*		201
,, Extractum	3 to 6 grs.	200
,, ,, *Fluidum*		200
,, Folia		199
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,, ,, *Comp.*		201
,, Succus	½ to 1 drm.	200
,, Tinctura	15 to 60 minims.	200
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,, Granati Radicis Cortex 182
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,, Laurocerasi Aqua, same as Acid. Hydrocyan. . . . 216
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,, Lini Infusum . . . 220
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,, *Angusturæ* . . . 147
,, *Armoraciæ compositum* . . . 66
,, Aurantii . . . 1 to 2 oz. . . . 71
,, ,, compositum . . . 1 to 2 oz. . . . 71
,, Buchu . . . 1 to 4 oz. . . . 87
,, Calumbæ . . . 1 to 2 oz. . . . 97
,, Caryophylli . . . 1 to 2 oz. . . . 109
,, Cascarillæ . . . 1 to 2 oz. . . . 109
,, Catechu . . . 1 to 2 oz. . . . 111
,, *Chinæ frigide paratum* . . . 126
,, Chiratæ . . . 1 to 2 oz. . . . 116
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Infusum Cuspariæ	1 to 2 ozs.	147
,, Cusso	4 to 8 ozs.	147
,, Digitalis	¼ to ½ ozs.	149
,, *Diosmæ. See* Buchu		87
,, *Dulcamaræ*	1 to 2 ozs.	150
,, Ergotæ	1 to 2 ozs.	154
,, Gentianæ compositum	1 to 2 ozs.	178
,, Jaborandi	1 to 2 ozs.	210
, Krameriæ	1 to 2 ozs.	214
,, *Laxativum*		311
,, Lini		220
,, Lupuli	1 to 2 ozs.	225
,, Maticæ	1 to 4 ozs.	231
,, Quassiæ	1 to 2 ozs.	286
,, *Rhataniæ. See* Infus. Krameriæ		214
,, Rhei	1 to 2 ozs.	294
,, Rosæ Acidum	1 to 2 ozs.	297
,, ,, *cum Acido Nitrico*		297
,, Senegæ	1 to 2 ozs.	310
,, Sennæ	1 to 2 ozs.	311
,, ,, *Comp.*		312
,, Serpentariæ	1 to 2 ozs.	312
,, *Simarubæ*		313
,, *Sinapis*		314
,, *Table of*		203
,, Uvæ Ursi	1 to 2 ozs.	351
,, Valerianæ	1 to 2 ozs.	351
,, *Vinca Majoris*		354
Inhalatio. See Vapores		352
,, *Acidi Carbolici*		10
,, Acidi Hydrocyanici		17
,, Chlori		97
,, *Chloroformi*		121
,, Coninæ		137
,, Creasoti		141
,, Iodi		207
,, ,, *c. Conio*		207
Injectio *Acidi Carbolici*		10
,, Apomorphinæ Hypodermica		61
,, *Cupri Sulphatis*		146
,, Ergotini Hypodermica		154
,, Morphinæ Hypodermica		236
Injectiones Hypodermicæ (group)		204
Insect Powder		285
,, *Poison bottle*		278
Iodetum Hydrargyricum Rubrum		191
,, *Hydrargyrosum flavum*		192
Iodi *Gargarisma*		207
,, *Glycerinum*		
,, *Inhalatio c. Conio*		

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,, Liquor		206
,, ,, *Comp.*		207
,, ,, *cum Kalio Iodato*		207
,, *Lotio comp.*		207
,, *Mistura Composita*		207
,, *Solutio Spirit.*		207
,, Tinctura	5 to 20 minims	207
,, ,, *Decolorata*		207
,, Unguentum		207
,, Vapor		207
Iodide *of Ammonium*		49
,, Arsenic		68
,, *Cadmium*		88
,, *Iron*		164
,, Lead		268
,, Mercury, Red		191
,, ,, *Green*		191
,, Potassium	2 to 10 grs.	279
,, Sodium		324
,, Sulphur		336
Iodine		205
Iodoform and Eucalyptus Bougies		205
Iodoformi Suppositoria		205
,, Unguentum		205
Iodoformum		204
Iodum	½ gr.	205
Iodure Mercureux		192
,, *Mercurique*		191
,, *de Plomb*		268
,, *Potassium*		280
,, *Sodium*		324
Ioduretum Plumbi		268
Ipecacuanha . Expectorant, ½ to 2 grs.	Emetic, 15 to 30 grs.	207
Ipecacuanhæ *Haustus comp.*		209
,, ,, *et Ammoniæ*		209
,, Pil. c. Scillâ	5 to 10 grs.	208
,, Pulvis compositus	5 to 10 grs.	208
,, ,, *et Opii*		208
,, ,, *Opiatus*		208
,, ,, *c. Opio*		208
,, ,, *Thebaicus*		208
,, *Syrupus*		209
,, *Tinctura*		209
,, Trochisci (¼ gr. in each)	1 to 3 loz.	208
,, ,, et Morphinæ	1 to 6 loz.	209
,, Vinum	5 to 40 minims	209
Ipomœa Purga		210
Iridin		374
Irish Moss		116

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Iron		159
„ Acetate of		160
„ *Alum*		41
„ Aromatic Mixture of		159
„ Arseniate of		161
„ *Bromide of*		161
„ Carbonate of, saccharated		161
„ *Chloroxyde of*		167
„ Citrate of, and Ammonium		163
„ „ Quinine		163
„ Compound Mixture of		162
„ Dialysed		166
„ *Iodide of*		164
„ *Malate of, Wine*		173
„ Perchloride of		165
„ Pernitrate of		167
„ Peroxide of		168
„ Phosphate of		168
„ Plaster		168
„ Reduced		171
„ Sulphate of		170
„ Tartarated		172
„ Wine		173
Isinglass		201
Jaborandi		209
„ Extractum	2 to 10 grs.	209
„ Infusum	1 to 2 oz.	210
„ Tinctura	30 to 60 minims	210
Jalapa	10 to 30 grs.	210
Jalapæ Abstractum		210
„ Extractum	5 to 15 grs.	210
„ Pulvis comp.	20 to 60 grs.	210
„ Resina	2 to 5 grs.	211
„ *Resinæ Tinctura*		211
„ Tinctura	½ to 2 drms.	211
Jalapine. See Jalapæ Resina		211
Jalapinus Sapo		211
Jamaica Sarsaparilla		305
James's Fever Powder		57
Jarisch's Ointment		23
Jasmine, Yellow		177
Jateorhiza Calumba		96
Jequirity		1
„ *Infusion of*		1
„ *Paste of*		1
Jeremie's Laudanum		253
Jordan Almond		51
Juglandin		374
Juices (group)		334
Juniperi Oleum	1 to 3 minims	211
„ „ *Empyreumaticum*		212

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JU to KR	Dose.	Page
Juniperi Spiritus	30 to 60 minims	211
Juniper Tar		212
,, ,, *Soap*		305
Juniperus communis		211
,, *Oxycedrus*		212
,, *Sabina*		298
Jusquiame noire		200
Kairin		212
Kali. See Potassa		272
,, *Bicarbonicum*		275
,, *Bitartarici depuratum*		283
,, *Chloricum*		277
,, *Hypermanganicum crystallisatum*		281
,, *Nitricum depuratum*		281
,, *Permanganicum*		281
,, *Sulphuricum*		282
,, *Tartaricum*		283
Kalium Bromatum		276
,, *Carbonicum*		277
,, ,, *depuratum*		277
,, *Causticum Fusum*		272
,, *Ferro-tartaricum*		173
,, *Hydro-Tartaricum*		283
,, *Iodatum*		280
,, *Natro-Tartaricum*		317
,, *Nitricum*		281
,, *Stibio-Tartaricum*		59
,, *Sulphuratum*		274
,, *Sulphuricum*		282
,, *Tartaricum*		283
Kamala	30 to 120 grs.	212
Kamalæ Tinctura		213
Kaolin		40, 212
,, *Unguentum*		212
Kino	10 to 30 grs.	213
,, Pulv. comp.	5 grs.	213
,, Tinctura	½ to 2 drms.	213
Kokum Butter		176
,, ,, *Tree*		176
Koso		147
Kousso		147
Krameria triandra		213
Krameriæ Extractum	5 to 20 grs.	214
,, Infusum	1 to 2 oz.	214
,, *Ixina*		213
,, Radix	Pulv. 20 to 60 grs.	213
,, *Suppositoria*		213
,, Tinctura	½ to 2 drms.	21
,, *Trochisci*		21
Kreasote		14

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LA to LI	Dose.	Page
Lac		214
,, *Sulphuris*		336
Lactic Acid		17
Lactuca		215
,, *Virosa*		215
Lactucæ Extractum	5 to 10 grs.	215
,, *Succus*		215
Lactucarii Syrupus		215
,, *Tinctura*		215
Lactucarium		215
Laitue, Eau de		215
Lamellæ Atropinæ		70
,, Cocainæ		130
,, Physostigminæ		261
Lapis Calaminaris Præparata		90
,, *Divinus*		146
,, *Tutiæ*		357
Larch Bark		215
Lard, Benzoated		32
,, Prepared		31
Laricis Cortex		215
,, Tinctura	20 to 30 minims	216
Laudanum. See Tinct. Opii		251
,, *Jeremie's*		253
,, *Sydenham's*		253
Laurocerasi Aqua	20 minims to 2 drms.	216
,, Folia		216
Lavandula Vera		216
Lavandulæ Oleum	1 to 4 minims	216
,, Spiritus	30 to 60 minims	217
,, ,, *compositus*		217
,, Tinctura comp.	½ to 2 drms.	217
,, ,, *Rubr.*		217
Lavement avec l'amidon		53
Lead, Preparations of		266
,, *Sugar of*		266
Leech		188
Lemon		217
Lenitive Electuary. See Confectio Sennæ		311
Leopard's Bane		67
Leptandrin		374
Lettuce		215
Lichen Islandicus		116
Liégeois Hypodermic Solution of Mercury		196
Lignum *Campechianum*		187
,, Guaiaci		183
,, *Santali Rubrum*		284
Lime		94
,, *Carbonate of, Precipitated*		91
,, Chlorinated		95

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LI	Dose.	Page
Lime *Hypophosphite of*		93
,, *Phosphate of*		94
,, *Slaked*		92
,, *Sulphate of*		94
,, *Sulphurated*		96
,, *Water*		92
Limon		217
Limonade Purgative		228
Limonis Cortex		217
,, Oleum	1 to 4 minims	217
,, Succus	½ to 4 oz.	218
Limonis Syrupus	1 to 2 drms.	218
,, Tinctura	½ to 2 drms.	218
Lini Cataplasma		219
,, Farina		219
,, Infusum		220
,, Oleum		220
,, Semina		220
Liniment for Freckles		93
Linimenta (group)		219
Linimentum Aconiti		30
,, Ammoniæ		44
,, *Ammoniato-Camphoratum*		99
,, Belladonnæ		78
,, ,, *comp.*		79
,, *Calcaire*		92
,, Calcis		92
,, Camphoræ		99
,, ,, compositum		99
,, *Cantharidis*, now called Liquor Epispasticus		104
,, *Capsici*		105
,, Chloroformi		120
,, *Conii*		137
,, *Crinale*		104
,, Crotonis		144
,, Hydrargyri		190
,, *Hyoscyami*		201
,, ,, *Comp.*		201
,, Iodi		206
,, Opii		251
,, Potassii Iodidi. c. Sapone		280
,, *Saponatum Camph. Liquid.*		305
,, Saponis		304
,, *Savonneux*		305
,, Sinapis compositum		314
,, Terebinthinæ		343
,, ,, Aceticum		343
Linseed Meal		219
Linteum Acid Borici		8
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Linum usitatissimum		219
Liqueur de Van Swieten		196
Liquid Glucose		179
Liquidambar orientalis		334
Liquiritia		180
Liquiritiæ Pulvis Compositus		181
Liquores (group)		220
Liquor Acidi Chromici		13
,, Ammoniæ	10 to 20 minims	43
,, *Ammoniæ Iodidi*		207
,, Ammonii Acetatis	2 to 6 drms.	45
,, ,, ,, fortior	20 to 60 minims	44
,, *Ammonii Anisatus*		47
,, ,, *Arsenitis*		7
,, ,, Citratis	2 to 6 drms.	49
,, ,, ,, fortior		43
,, Antimonii Chloridi		56
,, Arsenicalis	2 to 8 minims	6
,, *Arsenici Chloridi*		7
,, Arsenici Hydrochloricus	2 to 8 minims	6
,, ,, *et Hydrargyri Hydriodatis*		68
,, Arsenii et Hydrargyri Iodidi	10 to 30 minims	68
,, Atropinæ Sulphatis	1 to 4 minims	70
,, Bismuthi et Ammonii-citratis	½ to 1 drm.	82
,, Calcii Chloridi	15 to 50 minims	92
,, Calcis	½ to 2 oz.	92
,, ,, Chlorinatæ	20 to 40 minims	95
,, ,, saccharatus	15 to 60 minims	93
,, *Carbonis detergens*		141
,, Chlori	10 to 20 minims	118
,, *Chloroformi Camphoratus*		121
,, ,, *compositus*		121
,, *Donovani*		68
,, Epispasticus, Blistering Liquid		104
,, Ferri Acetatis		160
,, ,, *Bromidi*		161
,, ,, *Chloroxydi*		167
,, ,, Dialysatus		166
,, ,, *Iodidi*		165
,, ,, *Nitratis*		168
,, ,, *Oxydati Dialysati*		167
,, ,, *Oxychlorati*		167
,, ,, Perchloridi	10 to 30 minims	166
,, ,, ,, fortior		165
,, ,, Pernitratis		167
,, ,, Persulphatis		170
,, ,, *Sesquichlorati. See* Perchloridi		166
,, *Fowleri*		6
,, Gutta Percha		186
,, *Hydrargyri Iodidi Rubri*		191

LI	Dose.	Page
Liquor Hydrargyri Nitratis Acidus		192
,, ,, Perchloridi	30 to 120 minims	196
,, ,, ,, *for subcutaneous injection*		196
,, Iodi		206
,, ,, *Comp*		207
,, ,, *cum Kalio Iodato*		207
,, *Kali Caustici*		272
,, ,, *Citrici*		278
,, Lithiæ Effervescens	5 to 10 oz.	222
,, Magnesii Carbonatis	1 to 2 oz.	228
,, ,, Citratis	5 to 10 oz.	228
,, ,, *Sulphatis*		229
,, *Morphiæ Bimeconatis* (Squire)		237
,, Morphinæ Acetatis	10 to 60 minims	236
,, ,, ,, *for hypodermic injection*		236
,, ,, *c. Atropiâ, for hypodermic injection*		236
,, ,, Bimeconatis		237
,, ,, Hydrochloratis	10 to 60 minims	238
,, *Natri Caustici*		317
,, *Opii Sedativus* (*Battley*)		253
,, *Plumbi Diacetatis*		270
,, ,, Subacetatis		270
,, ,, ,, dilutus		270
,, ,, Subacetici		270
,, Potassæ	15 to 60 minims	272
,, ,, *Arsenitis. See* Liquor Arsenicalis		6
,, ,, Effervescens	5 to 10 oz.	275
,, Potassii Permanganatis	¼ to ½ oz.	282
,, *Sedativus* (*Battley*)		253
,, Sodæ	½ to 1 drm.	316
,, ,, Chlorinatæ	10 to 20 minims	317
,, Sodii Arseniatis	5 to 10 minims	319
,, ,, Effervescens		320
,, ,, Ethylatis		323
,, Strychninæ Hydrochloratis	4 to 10 minims	334
,, *Volatilis Cornu-cervi*		47
,, Zinci Chloridi		356
Liquorice		180
,, *Indian*		1
,, *Jamaica*		1
Liston's Plaster		201
Lithargyrum		269
Lithargyri Cremor		271
Lithiæ Liquor Effervescens	5 to 10 oz.	222
Lithii Benzoas		222
Lithii Carbonas	3 to 6 grs.	222
,, Citras	5 to 10 grs.	223
,, *Guaiacas*		223
,, *Salicylas*		223
Lithium		222

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LO to MA	Dose.	Page
Lobelia		223
,, *inflata*		223
Lobeliæ Tinctura	10 to 30 minims	224
,, ,, Ætherea	10 to 30 minims	224
Logwood		186
Lotio *Acidi Borici*		8
,, ,, *Carbolici*		10, 11
,, *Ammonii Chloridi*		48
,, *Benzoini*		80
,, *Bismuthi*		84
,, *Boracis*		86
,, *Crinalis*		44
,, *Cupri*		146
,, *Ferri Sulphatis*		171
,, *Gummi Rubri*		185
,, Hydrargyri flava		196
,, ,, nigra		197
,, *Iodi Comp.*		207
,, *Plumbi Acetatis*		268
,, ,, *Diacetatis*		271
,, *Zinci Acetatis*		355
Lotion avec l'Acétate de Plomb		270
Lozenges (group). See Trochisci		349
Lugol's Caustic		207
,, *Solution*		207
Lunar Caustic		64
Lupuli Extractum	5 to 10 grs.	225
,, Infusum	1 to 2 oz.	225
,, Tinctura	½ to 2 drms.	225
Lupulin		224
Lupulinæ Extractum		224
,, *Tinctura*		225
Lupulini Oleo-resina		224
Lupulinum	2 to 5 grs.	224
Lupulus		225
Mace, Oil of		241
Macidis Oleum Æthereum		241
Magistery of Bismuth		83
Magnesia *Fluid*		228
,, *Carbonica*		228
,, Levis	Antacid, 10 to 20 grs. Purgative, 20 to 60 grs.	226
,, Ponderosa	Antacid, 10 to 20 grs. Purgative, 20 to 60 grs.	226
,, *Sulphurosa*		229
Magnesiæ Mistura c. Rheo		228
Magnesii Carbonas Ponderosa	Antacid, 10 to 20 grs. Purgative, 30 to 60 grs.	227
Magnesii Carbonas Levis	Antacid, 10 to 20 grs. Purgative, 30 to 60 grs.	227
,, Carbonatis Liquor	1 to 2 oz.	228
,, Citratis Liquor	5 to 10 oz.	228
,, Sulphas	1 to 4 drms.	228

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MA to ME	Dose.	Page
Magnesii Sulphatis Enema		229
,, ,, *Liquor*		229
,, ,, *Mistura c. Rheo Infantium*		229
,, *Sulphis*		229
Magnesian Limestone		226
Magnesium		225
,, *preparations of*		226
Malate of Iron Wine		173
Male Fern		173
,, *Oil of*		174
Mallotus phillipinensis		212
Malt		88
,, *Extract of*		88
Manganese, Sulphate of		229
Manganesii Oxidum Nigrum		229
,, ,, *præparatum*		229
,, *Sulphas*		229
Manila Elemi		152
Manna		230
Mannite		230
Marble		230
Maranta		230
,, *arundinacea*		230
Marigold, Common		96
Marmor album		230
Massa Hydrargyri		190
Mastic		230
,, *Dentaire*		231
Mastiche	20 to 40 grs.	230
Mastix Resina		231
Materia Medica table		xxiv
Maticæ Folia	30 to 120 grs.	231
Maticæ Infusum	1 to 4 oz.	231
,, *Tinctura*		231
Matico Leaves		231
Matricaria		55
Measures, Metrical		xx
,, and Weights of British Pharmacopœia		xvii
Meat, Extract of		108
Meconic Acid		18 & 249
Meconin		249
Medicated Bougies		373
,, *pledgets of cotton*		373
Mel		231
,, Boracis		85
,, depuratum		232
Melaleuca Minor		90
Menispermin		374
Mentha Arvensis		233
,, *Piperita*		232

ME to MI	Dose.	Page
Mentha Viridis		233
Menthæ Piperitæ Aqua	1 to 2 oz.	232
„ „ Essentia	10 to 20 minims	232
„ „ Oleum	1 to 4 minims	232
„ „ Spiritus	30 to 60 minims	232
„ *Spiritus*		233
„ Viridis Aqua	1 to 2 oz.	233
„ „ Oleum	1 to 4 minims	233
Menthol		233
Mercury and Preparations		189
Metaphosphoric Acid		22
Methylene Bichloride		121
Mezerei Cortex		233
„ Extractum Æthereum		234
„ *Unguentum*		234
Mézéréon ou Bois Gentil		234
Mica Panis		234
„ „ *Cataplasma*		234
Milk		214
„ *Artificial Human*		214
Mindererus Spirit. See Liquor Ammon. Acetatis		45
Mineral Waters, British		375
„ „ *Classified*		413
„ „ *drunk at table*		412
„ „ *Foreign*		377
„ „ „ *Imported*		410
Misturæ (group)		234
Mistura *Acaciæ*		2
„ „ *Levis et Spissa*		2
„ *Alba*		228
„ Ammoniaci	½ to 1 oz.	42
„ „ *comp.*		42
„ „ *Ipec. et Lobeliæ*		42
„ Amygdalæ	1 to 2 oz.	51
„ „ *amaræ*		50
„ *Butyl-Chloral*		87
„ *Camphoræ. See* Aqua Camphoræ		99
„ *Camphorata*		99
„ *Cetacei*		114
„ *Chloroformi c. Ammon.*		121
„ *Colchici*		132, 133
„ „ *Aperiens*		133
„ *Conii c. Hyoscyam.*		137
„ *Copaibæ*		139
„ Creasoti	1 to 2 oz.	141
„ „ *c. Opio*		141
„ Cretæ	1 to 2 oz.	142
„ „ *Comp. c. Opio.*		142
„ Ferri Aromatica	1 to 2 oz.	159
„ „ composita	1 to 2 oz.	162

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MI to MO	Dose.	Page
Mistura Ferri et Quiniæ Effervescens		164
„ „ *Laxans*		171
„ *Filicis*		174
„ *Gentianæ*		178
„ „ *Alkalina*		178
„ „ *et Sennæ*		178
„ Guaiaci	½ to 2 oz.	184
„ *Hæmatoxyli*		187
„ „ *Comp.*		187
„ *Hydrargyri Iodidi*		191
„ *Iodi Comp.*		207
„ *Magnesiæ c. Rheo*		228
„ „ *Sulphatis c. Rheo Infantium*		229
„ *Moschi*		240
„ *Santali Olei*		302
„ Scammonii . . Infant, ½ to 1 oz.	Adult, 1 to 2 oz.	307
„ Sennæ comp.	1 to 1½ oz.	311
„ Spiritus Vini Gallici	1 to 2 oz.	331
Mixtura Saleb		301
Mixture for Cholera		142
„ *Whooping Cough*		130
Monobromated Camphor		100
Mori Succus		235
„ Syrupus	1 to 2 drms.	235
Morphiæ Murias		237
„ *Bimeconatis Liquor (Squire)*		237
Morphinæ Acetas	⅛ to ½ gr.	235
„ Acetatis Liquor	10 to 60 minims	236
„ „ „ *Hypodermica*		236
„ „ „ „ *c. Atropina*		236
„ Bimeconatis Liquor	5 to 40 minims	237
„ Hydrochloras	⅛ to ½ gr.	237
„ Hydrochloratis Liquor	10 to 60 minims	238
„ Hydrochloratis Suppositoria		238
„ Injectio Hypodermica	1 to 5 minims	236
„ *Oleas*		239
„ Sulphas		239
„ Suppositoria		238
„ „ c. Sapone		238
„ *Syrupus*		253
„ *Tartras*		239
„ Trochisci	1 or 2 loz.	238
„ „ et Ipecac.	1 or 2 loz.	239
Morrhuæ Oleum	1 to 4 drms.	239
Morus Nigra		235
Moschi Mistura		240
„ *Tinctura*		241
Moschus	5 to 10 grs.	240
„ *Moschiferus*		240
Moss, Iceland		115

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Mouth and Nose Protector (for poisonous and injurious trades)		182
Mucilage de Gomme Adragante		348
Mucilagines (group)		241
Mucilago Acaciæ		2
,, Amyli		53
,, *Cydonii*		148
,, *Salep*		301
,, Tragacanthæ		348
Mulberry Juice		235
Muriate of Ammonia. *See* Ammon. Chlorid		48
,, *Morphia*		237
Muriatic Acid		15
Musc		240
Muscadier cultivé		241
Musk		240
,, *Root.* *See* Sumbul		337
Mustard		313
,, Paper		314
Mynsicht's Elixir of Vitriol		26
Myristica	5 to 15 grs.	241
,, *fragrans*		241
Myristicæ Oleum	1 to 4 minims	241
,, ,, Expressum		241
,, *Semen*		241
,, Spiritus	30 to 60 minims	242
Myroxylon Pereiræ		73
,, *Toluifera*		74
Myrrh		242
Myrrha	10 to 30 grs.	242
Myrrhæ Gargarisma		242
,, Tinctura	½ to 1 drm.	242
,, ,, *et Boracis.* *See* Borax		86
Naphthalene		242
Naphthol		243
,, *preparations*		243
Narcein		248
Narcotina		248
Nataloin		39
Natro-Kali Tartaricum		317
Natrium Benzoicum		319
,, *Bromatum*		321
,, *Iodatum*		324
,, *Salicylicum*		326
Natrum Bicarbonicum		320
,, *Causticum Solutum*		317
,, *Hypochlorosum Solutum*		318
,, *Hypophosphorosum*		323
,, *Hyposulfurosum*		324

Official Names in Roman; all others in Italics.

NA to OI	Dose.	Page
Natrum Nitricum		325
,, *Phosphoricum*		325
,, *Sulphuricum*		326
Nectandra Rodiæi		243
Nectandræ Cortex		243
Nepenthe		253
Nickel, Sulphate of		243
Nicotiane ou Tabac		340
Nicotiana Tabacum		340
Nicotin		340
Nightshade, Deadly		76
Nitras Argenticus bis Mitigatus		65
,, *Hydrargyri Liquidus*		192
,, *Kalicus*		281
,, *Sodæ*		325
Nitrate of Ammonium		49
,, *of Bismuth*		82
,, of Copper		145
,, of Lead		269
,, of Pilocarpine		262
,, of Potassium		281
,, of Silver		64
,, of Silver, Toughened		65
,, ,, ,, *Caustic Points*		65
,, ,, ,, *Black Stains, to remove*		65
,, of Sodium		324
Nitre		281
Nitric Acid		19
,, ,, Diluted		19
Nitrite of Amyl		52
,, *of Sodium Pure*		325
Nitro-Glycerine		243
Nitro-Glycerini Tabellæ	1 to 2 tablets	243
Nitro-Hydrochloric Acid, diluted		20
,, ,, *Bath*		20
Nitrous Oxide Gas		49
Noix Vomique		244
Nucis Vomicæ Extractum	¼ to 1 gr.	244
,, ,, Tinctura	10 to 20 minims	245
Nutmeg		241
Nux *Moschata*		241
,, Vomica	1 to 3 grs.	244
Oak Bark		287
Oil of Amber		335
,, Anise	1 to 4 minims	55
,, Cajuput		90
,, *Canada Fleabane*		155
,, Dill	1 to 4 minims	54
,, Eucalyptus		155
,, Juniper		211

Official Names in Roman; all others in Italics.

OI to OL	Dose.	Page
Oil of Lavender		216
„ Lemon	1 to 4 minims	217
„ *Mace*		241
„ *Male Fern*		174
„ Peppermint		232
„ Rosemary		298
„ Rue		298
„ Sandalwood		302
„ Spearmint		233
„ Theobroma		344
„ Turpentine		342
„ *Vitriol. See* Acid Sulphuric		24
Oils (group)		245
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Ointment of Carbolic Acid		11
„ *Chrysophanic Acid*		122
Olea Europæa		247
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„ *Aluminium*		247
„ *Atropine*		70, 247
„ *Bismuth*		247
„ *Cocaine*		247
„ *Copper*		247
„ *Iron*		247
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„ Mercury		21, 193
„ *Morphine*		239, 247
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„ *Potassium Solution*		247
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„ *Veratrine*		247
„ Zinc		21, 247
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„ *Atropinæ*		70, 247
„ Hydrargyri		21, 193
„ Zinci		21, 247
Oleic Acid		20
Oleoresina Aspidii		174
„ *Capsici*		105
„ Cubebæ	5 to 30 minims	144
„ *Lupulini*		224
„ *Zingiberis*		359
Oleum Amygdalæ	2 to 4 drms.	51
„ „ *Amaræ*		50
„ Anethi	1 to 4 minims	54

OL	Dose.	Page
Oleum Anisi	1 to 4 minims	55
,, Anthemidis	1 to 4 minims	56
,, *Anthos*		298
,, *Aurantii Corticis*		72
,, ,, *Florum*		72
,, *Bals. Copaivæ*		139
,, *Betulæ Albæ*		80
,, *Cacao*		344
,, *Cadinum*		212
,, Cajuputi	1 to 3 minims	90
,, *Camphoratum*		99
,, Carui	2 to 4 minims	108
,, Caryophylli	1 to 4 minims	109
,, *Chamomillæ Citratum*		56
,, Cinnamomi	1 to 4 minims	128
,, *Citri*		218
,, Copaibæ	5 to 20 minims	139
,, Coriandri	1 to 4 minims	139
,, Crotonis	⅓ to 1 minim	143
,, Cubebæ	5 to 20 minims	145
,, *Dugong*		151
,, *Erigerontis Canadensis*		155
,, *Filicis Maris. See* Extractum		174
,, *Gynocardiæ*		186
,, *Jecoris Aselli*		239
,, Juniperi	1 to 3 minims	211
,, ,, *empyreumaticum*		212
,, Lavandulæ	1 to 4 minims	216
,, Limonis	1 to 4 minims	217
,, Lini		220
,, *Macidis*		241
,, *Macidis Æthereum*		241
,, Menthæ Piperitæ	1 to 4 minims	232
,, ,, Viridis	1 to 4 minims	233
,, Morrhuæ	1 to 4 drms.	239
,, Myristicæ	1 to 4 minims	241
,, ,, expressum		241
,, *Neroli*		72
,, *Nucistæ*		242
,, *Nucis Moschatæ*		242
,, Olivæ	½ to 1 oz.	247
,, Phosphoratum	5 to 10 minims	259
,, Pimentæ	1 to 3 minims	264
,, Pini Sylvestris		264
,, Ricini	Infant, 1 to 3 drms. Adult, ½ to 1 oz.	295
,, Rosmarini	1 to 5 minims	298
,, Rutæ	1 to 4 minims	298
,, Sabinæ	1 to 5 minims	299
,, *Santal. flav.*		302
,, Santali		302

OL to OX	Dose.	Page
Oleum Sinapis		314
,, ,, *Ætherеum*		314
,, *Succini*		335
,, Terebinthinæ	10 to 30 minims. Anthelm. 2 to 4 drms.	342
,, Theobromæ		344
,, *Tiglii*		144
Olivæ Oleum	½ to 1 oz.	247
Ophelia Chirata		116
Opianic Acid		249
Opianine		249
Opii *Aqua*		253
,, Confectio	5 to 20 grs.	250
,, Emplastrum		250
,, Enema		250
,, Extractum	¼ to 1 gr.	250
,, ,, liquidum	10 to 40 minims	251
,, Linimentum		251
,, *Liquor Sedativus*		253
,, *Pilula*, now Pil. Sapon. comp.		251
,, Pulv. comp.	2 to 5 grs.	251
,, Tinctura	5 to 30 minims	251
,, ,, Ammoniata	½ to 1 drm.	252
,, Trochisci	1 or 2 loz.	252
,, *Unguentum*		253
,, Vinum	10 to 40 minims	252
,, ,, *sine Aromatic.*		252
Opium	½ to 2 grs.	248
,, *Group of Preparations, with Proportions*		252
,, *Therapeutical Equivalents of*		238
Opodeldoc. See Linimentum Saponis		304
,, *Arnica*		67
,, *Steer's*		305
Opuntia Cochinillifera		130
Orange, preparations of		70—73
Orge Perlé		188
Oryza Sativa		52
Os Ustum		253
Otto de Rose		298
Ovi Albumen		253
,, Vitellus		254
Ox bile purified		158
Oxalate of Cerium		114
Oxide of Antimony		57
,, Bismuth		84
,, Silver		65
,, Zinc		356
,, ,, *Soap*		305
Oxyde de Fer Anhydre		168
,, *Mercurique Jaune*		194
,, ,, *Rouge*		195

OX to PA	Dose.	Page
Oxydum Hydrargyri Flavum		194
,, ,, *Rubrum*		195
,, *Hydrargyricum*		195
,, *Magnesicum Ponderosum*		227
Oxymel	1 to 2 drms.	232
,, Scillæ	½ to 1 drm.	309
Oxynitrate of Bismuth		83
Pale Catechu		111
Pancreatic Emulsion		254
Pancreatine		254
Pancreatized Fat		254
Panis Cataplasma		234
Papaver Rhœas		295
,, *somniferum*		248, 255
Papaverin		248
Papaveris Capsulæ		255
,, Decoctum		255
,, ,, *concentratum*		256
,, Extractum	2 to 5 grs.	255
,, ,, *liquidum*		255
,, Syrupus	1 drm.	255
Paper of Atropine		70
Papier d'Albespeyres		104
,, *Épispastique*		103
Papiers Carbonifères		106
Paraffin, Hard		256
,, Soft		256
,, *Solid*		256
,, *Wax*		256
Paraffina Mollis		257
Paraffine		256
Paraffini Unguentum		257
Paraffinum Durum		256
,, Molle		256
,, *Solidum*		256
,, *Unguentum*		256
Paraldehyde		257
Paramorphia		248
Paregoric Elixir		100
,, *Scotch*		252
Pareiræ Decoctum	1 to 2 oz.	258
,, Extractum	10 to 30 grs.	258
,, ,, liquidum	½ to 2 drms.	258
,, Radix	30 to 60 grs.	257
Parietaria		258
Parrish's Chemical Food		169
Pasta Abri Precatorii		1
,, *Caustica*		273
Paste, Arsenical, Frères Come's		7
,, ,, *for Dentists*		7

Official Names in Roman; all others in Italics.

PA to PH — Dose. — Page

Pastilles, Codeine 131
„ *Schuster's* 28
Paullinia Sorbilis 184
Pavot 255
Pearl Barley 188
Pearson's Solution 319
„ *Cerate* 270
Pegu Catechu 112
Pelletierin, Tannate of 183
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Pellitory Root 285
Pelosine 243
Pencils of Croton Oil 144
Pepper, Black 264
„ *Guinea* 104
„ *Pod* 104
Peppermint Essence 232
„ *Preparations* 232
Pepsine . . . . 2 to 5 grs. 258
„ *de Boudault* 259
„ *Porci* 258
Pepsine-Squire 259
Perchloride of Mercury 195
Percolation, instructions for 347
Periwinkle, Great 354
Permanganate of Potassium 281
Peroxide of Iron 168
Persulphate of Mercury 196
Peru Balsam 73
Pessus Acidi Tannici 28
„ *Glycerini* 180
„ *Hydrargyri Bromidi* 191
„ „ *Bibromidi* 191
„ *Plumbi Acet.* 268
„ „ „ *c. Opio* 268
„ „ *Iodidi* 269
„ *Potassii Bromidi* 276
„ „ *Iodidi* 280
„ *Sodii Bicarbonatis* 320
Petrolatum 256
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Peucedanum graveolens 54
Prunus F[illegible] 84
Phenate de Soude, Solution de 11
Phenic Acid 9
„ *Alcohol* 9
Phenol 9
Phosphas Calcicus 94
„ *Natricus* 325
„ *Sodæ* 325

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PH to PI	Dose.	Page
Phosphate de Chaux		94
,, *Soude*		325
Phosphate of Ammonium	5 to 20 grs.	49
,, Calcium		94
,, Iron		168
,, *Lime*		94
,, Sodium		325
Phosphoratum Oleum		259
Phosphori Pilula		260
,, ,, *c. Sævo*		260
Phosphoric Acid, concentrated		21
,, ,, diluted	10 to 30 minims	22
,, ,, *Glacial*		22
,, ,, (*Metaphosphoric*)		22
Phosphorus		259
,, Oil	5 to 10 minims	259
,, Pill	2 to 4 grs.	260
Physalis Alkakengi		260
,, ,, *Tinctura*		260
Physeter Macrocephalus		114
Physostigma Venenosum		260
Physostigmatis Extractum	$\frac{1}{16}$ to $\frac{1}{4}$ gr.	261
,, Semen	1 to 4 grs.	260
,, *Injectio*		261
,, *Tinctura*	10 minims	261
Physostigmina		261
Physostigminæ *Guttæ*		262
,, Lamellæ		261
,, *Salicylas*		262
,, *Sulphas*		262
Physostigmine		261
Phytolaccin		374
Picis *Capsulæ*		266
,, Emplastrum		265
,, *Liquidæ Aqua*		266
,, ,, Unguentum		266
,, *Pilulæ*		266
,, *Unguentum Molle*		266
Picræna excelsa		286
Pierre Divine		146
Pil. Vallet		161
Pills (group)		263
Pilocarpiæ Guttæ		262
Pilocarpinæ Nitras	$\frac{1}{20}$ to $\frac{1}{2}$ gr.	262
,, *Hydrochloras*		262
Pilocarpine		262
,, Nitrate of		262
Pilocarpus Pinnatifolius		209
Pilulæ (group)		263
,, Aloes Barbadensis	5 to 10 grs.	36

Official Names in Roman; all others in Italics.

PI	Dose.	Page
Pilulæ Aloes diluta. See Pil. Aloes Barbadensis		37
,, ,, et Asafœtidæ	5 to 10 grs.	38
,, ,, et Ferri	5 to 10 grs.	36
,, ,, et Myrrhæ	5 to 10 grs.	38
,, ,, Socotrinæ	5 to 10 grs.	38
,, *Antimonii comp. See* Pil. Hydrarg. Subchlor. Comp.		198
,, Asafœtidæ composita	5 to 10 grs.	69
,, *Butyl-Chloral*		87
,, *Calomelanos composita. See* Pil. Hydrarg. Subchloridi Comp.		198
,, Cambogiæ composita	5 to 10 grs.	98
,, *Carthárticæ Comp.*		98
,, Colocynthidis composita	5 to 10 grs.	135
,, ,, et Hyoscyami	5 to 10 grs.	135
,, Conii composita	5 to 10 grs.	136
,, *Copaibæ*		139
,, *Cupri comp.*		146
,, *Digitalis comp.*		149
,, *Elaterii*		151
,, Ferri Carbonatis	5 to 20 grs.	162
,, ,, Iodidi	3 to 8 grs.	164
,, ,, *Redacti*		172
,, *Galbani composita. See* Pil. Asaf. Co.		69, 175
,, Hydrargyri	Alterative, 3 to 8 grs. Purgative, 10 grs.	190
,, ,, *Iodidi Viridis*		192
,, ,, Subchloridi composita	5 to 10 grs.	198
,, ,, ,, *c. Colocynth*		198
,, ,, ,, *c. Jalapâ*		198
,, ,, ,, *c. Scammoniâ*		198
,, *Hydrargyricæ*		190
,, Ipecacuanhæ c. Scillâ	5 to 10 grs.	208
,, *Opii comp. See* Pil. Saponis composita		251
,, Phosphori	2 to 4 grs.	260
,, ,, *c. Sævo*		260
,, *Picis*		266
,, Plumbi c. Opio	4 grs.	267
,, *Plummeri. See* Pil. Hyd. Subchl. Co.		198
,, Rhei composita	5 to 10 grs.	294
,, *Rufi*		38
,, Saponis composita	3 to 5 grs.	251
,, Scammonii Compos.	5 to 15 grs.	308
,, Scillæ composita	5 to 10 grs.	309
Pilule Anderson		98
,, *de Carbonate Ferreux*		163
Pilules de Bontius		98
,, *Mercurielles Simples*		190
Pimenta	10 to 30 grs.	263
,, *Officinalis*		263
Pimentæ Aqua	1 to 2 oz.	263
,, Oleum	1 to 3 minims	
Pimento		

Official Names in Roman; all others in Italics.

PI to PL	Dose.	Page
Pimpinella Anisum		54
Pini Pyroleum		266
,, *Resina*		265
,, Sylvestris Oleum		264
,, ,, Olei Vapor		264
Pinus Australis		342
,, *Balsamea*		342
,, *Larix*		215
,, *maritima*		266
,, *Picea*		265
,, *Pinaster*		342
,, *Sylvestris*		264, 265, 342
,, *Tæda*		342
Piper Angustifolium		231
,, *Cubeba*		144
,, Nigrum	5 to 20 grs.	264
Piperis Confectio	60 to 120 grs.	265
Pissenlit		341
Pistacia Lentiscus		230
Pitch Burgundy		265
,, *Black*		266
,, Burgundica		265
,, liquida	20 to 60 minims	265
Plasma. See Glycerinum Amyli		53
Plasters (group)		152
Plumbi Acetas	1 to 4 grs.	266
,, Acetatis *Lotio*		268
,, ,, *Pessus*		268
,, ,, Unguentum		267
,, *Aqua*		270
,, Carbonas		268
,, Carbonatis Unguentum		268
,, *Diacetatis Liquor*		270
,, ,, *Lotio*		271
,, Emplastrum		269
,, *Gargarisma*		271
,, Iodidi Emplastrum		268
,, ,, *Pessus*		269
,, ,, Unguentum		269
,, Iodidum		268
,, *Lotio Diacetatis*		271
,, Nitras		269
,, Oxidum		269
,, Pil. c. Opio	4 grs.	267
,, *Subacetas liquidus*		270
,, Subacetatis Glycerini Unguentum		271
,, ,, Glycerinum		270
,, ,, Liquor		270
,, ,, ,, dilutus		270
,, *Unguentum*		271

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PL to PO	Dose.	Page
Plumbi Suppositoria comp.	3 grs. in each. 1 gr. Opium	267
,, *Unguentum*		271
Plumbum		266
,, *Acetum Solutum*		270
,, *Aceticum*		267
,, ,, *Basicum Solutum*		270
,, *Carbonicum*		268
,, *Iodatum*		268
Podophylli Resina	⅛ to 2 grs.	271
,, Rhizoma	10 to 20 grs.	271
,, Tinctura	15 to 30 minims	271
,, ,, *Ammoniata*		271
Podophyllum Peltatum		271
Pod Pepper		104
Poivre Noir		265
,, *de Guinée*		105
Poix de Bourgogne		265
,, *Resine*		291
Polygala Senega		310
Pomegranate Root Bark		182
Pommade avec l'Oxyde Jaune de Mercure		194
,, *de Carbonate de Plomb*		268
,, *Epispastique Jaune*		104
,, *Epispastique Verte*		104
,, *de Goudron*		266
,, *d'Iodure de Potassium Iodurée*		207
,, *Mercurielle Faible*		190
,, *Stibiée*		59
,, *de Soufre*		336
Poppy Capsules		255
,, Petals, Red		295
Porcelain Clay		212
Potash Water		275
Potassa. *See* Potassa Caustica		272
,, Caustica		272
,, ,, *Soluta*		272
,, *c. Calce*		273
,, Sulphurata	3 to 8 grs.	273
Potassæ Arsenitis Liquor		6
,, *Bitartras. See* Potassæ Tartras Acida		283
,, *Chloras*		277
,, Liquor		272
,, ,, *Brandish*		273
,, ,, Effervescens	5 to 10 oz.	275
,, *Sulphas*		282
,, *Tartras*		283
Potassii Acetas	10 to 20 grs.	274
,, *Benzoas*		274
,, Bicarbonas	10 to 20 grs.	274
,, Bichromas		275

PO to PR	Dose.	Page
Potassii *Bromidi Pessus*		276
,, Bromidum	20 to 60 grs.	275
,, *Bromuretum*		276
,, Carbonas	10 to 30 grs.	276
,, Chloras	10 to 20 grs.	277
,, Chloratis Trochisci. 5 grs. in each.	1 to 6 loz.	277
,, ,, *Gargarisma*		277
,, Citras	20 to 60 grs.	277
,, Cyanidum		278
,, *et Sodii Tart.*		317
,, Ferrocyanidum		279
,, *Hydras. See* Potassa Caustica		272
,, Iodidi Linimentum c. Sapone		280
,, ,, *Pessus*		280
,, ,, Unguentum		280
,, Iodidum	2 to 10 grs.	279
,, Nitras	5 to 20 grs.	281
,, ,, *for Spray*		281
,, *Nitratis Gargarisma*		281
,, Permanganas	1 to 2 grs.	281
,, Permanganatis Liquor	2 to 4 drms.	282
,, *Prussias Flava*		279
,, *Subcarbonas*		276
,, Sulphas	10 to 20 grs.	282
,, *Sulphis*		282
,, Sulphuratæ Unguentum		274
,, Tartras	Alterative, 20 to 60 grs. Purgative, 120 to 200 grs.	282
,, ,, Acida.	Diuretic, 20 to 60 grs. Aperient, 60 to 120 grs.	283
Potassium		272
Potion Gommeuse		2
Poudre de Dower		208
,, *d'Ipecacuanha Opiacée*		208
Powders (group)		284
Precipitated Carbonate of Calcium		91
,, ,, *Lime*		91
,, Sulphur		335
Præcipitatum Album		198
Prepared Chalk		141
,, Lard		31
,, *Sulphuret of Antimony*		58
Proof Spirit		330
Protochlorure de Mercure		197
Proto Ioduretum Hydrargyri		192
Pruni Virginianæ Cortex		284
,, ,, *Syrupus*		284
Prunier Commun		284
Prunum		283
Prunus Amygdalus		50, 51
,, *Domestica*		283
,, *Laurocerasus*		216

Official Names in Roman; all others in Italics.

PR to PY	Dose.	Page
Prussiate of Potash, yellow		279
Prussic Acid		16
Pterocarpi Lignum		284
Pterocarpus Marsupium		213
,, *Santalinus*		284
Pulpa Prunorum		284
Pulpe de Casse		110
Pulveres (group)		284
Pulvis Amygdalæ compositus	60 to 120 grs.	51
,, Antimonialis	2 to 6 grs.	57
,, *Aromaticus. See* Pulv. Cinnam. comp.		128
,, Catechu compositus	20 to 40 grs.	111
,, Cinnamomi comp.	3 to 10 grs.	128
,, Cretæ Aromaticus	10 to 60 grs.	142
,, ,, ,, c. Opio	10 to 40 grs.	142
,, *Doveri*		208
,, Elaterini Comp.	½ to 5 grs.	152
,, Glycyrrhizæ Compositus	1 drm.	181
,, *Gregorii*		294
,, Ipecacuanhæ compositus	5 to 10 grs.	208
,, ,, *c. Opio*		208
,, ,, *et Opii*		208
,, ,, *Opiatus*		208
,, ,, *Thebaicus*		208
,, *Jacobi*		57
,, Jalapæ compositus	20 to 60 grs.	210
,, Kino compositus	5 grs.	213
,, ,, *c. Opio*		213
,, *Liquiritiæ compositus*		181
,, *Magnesiæ c. Rheo*		294
,, Opii compositus	2 to 5 grs.	251
,, *Pectoralis Kurellæ*		181
,, Rhei compositus	30 to 60 grs.	294
,, *Salicylicus cum Talco*		24
,, *Salinus Anticholericus*		320
,, Scammonii compositus	10 to 20 grs.	308
,, Tragacanthæ compositus	10 to 60 grs.	348
Punica Granatum		182
Pure Ether		34
Pure Silver		66
Purified Animal Charcoal		106
,, Ox Bile		158
Pyrethre Officinal		285
Pyrethri Radix		285
,, Tinctura		285
Pyrethrum Roseum		285
Pyridin		285
Pyroborate of Sodium		85
Pyrogallic Acid		23
Pyrogallol		23

PY to RE	Dose.	Page
Pyroleum Pini		266
Pyroligneous Acid purified		3
Pyrosis, Mixture for		81
Pyroxylic Spirit, Rectified		35
Pyroxylin		285
Quassia Amara		286
Quassiæ Extractum	3 to 5 grs.	286
,, Infusum	1 to 2 oz.	286
,, Lignum		286
,, Tinctura	1 to 2 drms.	286
Quebracho		286
,, *blanco*		286
Quercus *Alba*		287
,, Cortex	30 to 120 grs.	287
,, Decoctum	1 to 2 oz.	287
,, ,, *Aluminatum*		287
,, *lusitanica var. Infectoria*		175
,, *Robur*		287
Quillaya Saponaria		287
,, *Tinctura*		287
Quince Seed		148
Quinetum		291
Quinina		290
Quininæ *Arsenias*		290
,, *Bisulphas*		290
,, *Carbolas*		290
,, *Citras*		290
,, *Dikinatis Syrupus*		290
,, *Hydriodatis Syrupus*		291
,, Hydrochloras	1 to 10 grs.	287
,, *Hypophosphis*		290
,, *Phosphas*		290
,, *Salicylas*		290
,, Sulphas	1 to 6 grs.	288
,, ,, *Neutralis*		290
,, Tinctura	1 to 1½ drms.	288
,, ,, Ammoniata	1 to 2 drms.	290
,, *Valerianas*		290
,, Vinum	½ to 1 oz.	290
Quinquina		123
,, *Teinture de*		126
Raifort		66
Raisins		350
Ratanha		214
Rectified Spirit		330
Red Cinchona Bark		123
,, *Gum*		185
,, Iodide of Mercury		190
,, Oxide of Mercury		194
,, Poppy Petals		295

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RE to RI	Dose.	Page
Red Rose Petals		297
,, Sandal-wood		284
,, *Sanders-Wood*		284
Reduced Iron		171
Refined Silver		66
,, Sugar		300
Regnauld's Anæsthetic Mixture		121
Resina		291
,, *Copaibæ*		139
,, Jalapæ	2 to 5 grs.	211
,, *Mastix*		231
,, *Pini*		265, 291
,, Podophylli	⅛ to ½ gr.	271
,, Scammoniæ		308
Resinæ Emplastrum		291
,, *Pini Emplastrum*		291
,, Unguentum		291
Resorcin		291
Rhamni Frangulæ Cortex		292
,, ,, Extractum		292
,, ,, ,, Fluidum		292
,, Purshiani Cortex		292
Rhamnus Frangula		292
,, *Purshianus*		292
Rhatanhia. See Krameria		214
Rhatany Root		213
Rhei Extractum	3 to 6 grs. Br. Ph. dose 5 to 20 grs.	293
,, ,, *Compositum*		295
,, Infusum	1 to 2 oz.	294
,, Pilula comp.	5 to 10 grs.	294
,, Pulv. comp.	½ to 1 drm. 5 to 10 grs. for a child.	294
,, Radix	Stom. 1 to 5 grs. Purg. 10 to 20 grs.	293
,, Syrupus	1 to 4 drms.	294
,, ,, *Aromat.*		294
,, ,, *Comp.*		294
,, Tinctura	1 to 2 drms.	294
,, ,, *Vinosa*		295
,, Vinum	1 to 2 drms.	295
Rheum Officinale		293
,, *Ponticum*		293
,, *Palmatum*		293
Rhizoma Graminis		348
Rhœados Petala		295
,, Syrupus	1 to 2 drms.	295
Rhubarb		293
Ricini *Decoctum*		296
,, *Olei Capsulæ*		296
,, ,, *Emulsiones*		296
,, Oleum	Adult, ½ to 1 oz. Infant, 1 to 3 drms.	295
Ricinus Communis		295

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RO to SA	Dose.	Page
Roche Alum		40
Rochelle Salt		317
Rock Salt, Pure		322
Rosa Canina		296
,, *Centifolia*		296
,, *damascena*		298
,, *Gallica*		297
Rosæ Aqua	1 to 2 oz.	296
,, Caninæ Fructus		296
,, ,, Confectio	60 grs.	296
,, Centifoliæ Petala		296
,, *Essentia*		298
,, *Flores Centifoliæ*		296
,, ,, *Pallidæ*		296
,, Gallicæ Confectio	½ to 1 drm.	297
,, ,, Petala		297
,, Gallicæ Syrupus		297
,, Infusum Acid.	1 to 2 oz.	297
,, ,, *c. Acido Nitrico*		297
,, *Oleum*		298
Rose Pâle		296
,, *Rouge*		297
Rosmarini *Ætheroleum*		298
,, *essentia*		298
,, Oleum	1 to 5 minims	298
,, Spiritus	30 to 60 minims	298
Rosmarinus Officinalis		298
Rouge		168
Rue, Oil of		298
Rufi Pilula		38
Rumicin		374
Ruta graveolens		298
Rutæ *Confectio*		298
,, *Enema*		298
,, *Essentia*		298
,, Oleum	1 to 4 minims	298
,, *Syrupus*		298
Sabadilla	4 to 6 grs.	299
Sabinæ cacumina	5 to 10 grs. powder	299
,, Essentia		299
,, Oleum	1 to 5 minims	299
,, Tinctura	15 to 60 minims	299
,, Unguentum		300
Saccharated Carbonate of Iron		161
,, Solution of Lime		93
Sacchari Fæx		344
Saccharum Lactis	1 to 2 drms.	300
,, purificatum		300
Sachets de Charpie Carbonifères		106
Sacred Bark		292

Official Names in Roman; all others in Italics.

SA	Dose.	Page
Saffron		143
Safran		143
St. Ignatius's bean		245
St. John Long's Liniment		343
Sal Ammoniac		48
,, *Polychrestum Seignetti*		317
,, *Volatile*		47
Salep		301
Salib Misri		301
Salicin		301
Salicinum	5 to 20 grs.	301
Salicylas Sodæ		326
Salicylate de Soude		326
,, *of Lithium*		223
,, of Sodium		325
Salicylic Acid		23
,, *Gutta-Percha Plaster*		24
Salix Alba		301
Salt		322
,, *of Tartar*		276
,, *of Wormwood*		276
,, *Spirit of*		15
Saltpetre		281
Sambuci Aqua		302
,, Flores		301
,, *Unguentum*		302
,, ,, *Viride*		302
Sambucus nigra		301
Sandal-wood, Red		284
,, ,, Oil		302
Sangsue medicinale		188
Sanguinarin		374
Sanguisuga officinalis		188
,, *medicinalis*		188
Santal Rouge		284
Santali Oleum		302
,, *Flavi Oleum*		302
,, *Olei Mistura*		302
,, ,, *Capsulæ*		302
Santalum Album		302
,, *Rubrum*		284
Santonica	10 to 60 grs.	302
Santonini Trochisci		303
Santoninum	Infant, 2 to 3 grs.	303
Sapo		303
,, animalis		303
,, durus	5 to 15 grs.	304
,, *Jalapinus*		
,, *Kalinus*		
,, *medicatus*		

Official Names in Roman; all others in Italics.

SA to SE	Dose.	Page
Sapo mollis		305
,, *Viridis*		305
Saponis Emplastrum		304
,, ,, Fuscum		304
,, Linimentum		304
,, Pilula Comp. *See* Opium		251
Sarsaparilla		305
,, *Indian*		187
Sarsæ Decoctum	½ to 1 pint	306
,, ,, compositum	½ to 1 pint	306
,, Extractum liquidum	1 to 4 drms.	306
,, ,, ,, *compositum*		306
,, Radix		305
Sassafras *officinale*		307
,, Radix		307
Savin Tops		299
Savon Blanc		304
Scammoniæ Radix		307
,, Resina	4 to 8 grs.	308
Scammonii Confectio	10 to 30 grs.	308
,, Mistura	2 oz.	307
,, Pilula Composita	5 to 15 grs.	308
,, Pulvis Compositus	10 to 20 grs.	308
Scammonium	5 to 10 grs.	307
Schænocaulon officinale		299
Schuster's Pastilles		28
Scilla	1 to 2 grs.	308
Scillæ Acetum	15 to 40 minims	309
,, Oxymel	½ to 1 drm.	309
,, Pil. comp.	5 to 10 grs.	309
,, Syrupus	½ to 1 drm.	309
,, Tinctura	15 to 30 minims	309
Sclerotic Acid		154
Scoparii Cacumina		309
,, Decoctum	2 to 4 oz.	310
,, Succus	1 to 2 drms.	310
Scotch Paregoric		252
Scott's Ointment		190
Scutellarin		374
Sebum		313
,, *Ovile*		313
,, *Ovillum*		313
Secale cereale		153
,, *cornutum*		154
Secalis Cornuti Extractum		154
Seidlitz Powder		317
Seigle Ergot		154
Calabariense		261
		303
		241

SE to SI	Dose.	Page
Semen Physostigmatis		261
,, *Strychni*		244
Senecionin		374
Senegæ Infusum	1 to 2 oz.	310
,, Radix	15 to 20 grs. powder	310
,, *Syrupus*		310
,, Tinctura	½ to 2 drms.	310
Senna		310
,, *Alexandrina*		311
,, *Indica*		311
,, *Tinnivelly*		311
Sennæ Confectio	1 to 2 drms.	311
,, Infusum	1 to 2 oz.	311
,, ,, *Compositum*		312
,, Mistura comp.	1 to 1½ oz.	311
,, Syrupus	1 to 2 drms.	312
,, Tinctura	1 to 4 drms.	312
Sero-sublimate gauze		196
Serpentariæ Infusum	1 to 2 oz.	312
,, Rhizoma	10 to 15 grs. powder	312
,, Tinctura	½ to 2 drms.	312
Sesquicarbonate of Ammonia		46
Sevum præparatum		313
Sherry		353
Silver		64
,, Nitrate of		64
,, Oxide of		65
,, Refined		66
,, Toughened Nitrate of		65
Simabæ Cedronis Semen		313
Simaruba		313
,, *officinalis*		313
Simarubæ Infusum		313
Sinapine		105
Sinapis		313
,, *Ætheroleum*		314
,, Cataplasma		314
,, Charta		314
,, *Charta*, U.S.		314
,, *Essentia*		314
,, *Infusum*		314
,, Liniment. comp.		314
,, Oleum		314
,, ,, *Æthereum*		314
,, ,, *Volatile*		314
,, *Spiritus*		314
Sirop Diacode		255
,, *de Gomme*		2
,, *de Mûres*		
,, *de Rhubarbe composé*		

SI to SO	Dose.	Page
Slaked Lime		92
Smilax officinalis		305
Snake Root, Black		31
Snuff, Ferriérs		84
Soap		303
,, *Bark*		287
,, Curd		303
,, Hard		304
,, Soft		305
,, *White Castile*		304
Soaps, various		305
Socotrine Aloes		37
Soda caustica		316
,, ,, *fusa*		316
,, ,, soluta		317
,, *preparations* (*group*)		315
,, Tartarata	2 to 4 drms.	317
,, *water*		320
Sodæ Chlorinatæ Cataplasma		318
,, ,, Liquor	10 to 20 minims	317
,, *Hypophosphitis Solutio*		323
,, Liquor	$\frac{1}{2}$ to 1 drm.	316
,, ,, effervescens		320
,, *Nitras*		324
,, *Salicylas*		325
,, Sesquicarbonas		319
Sodii Acetas		318
,, Arsenias	$\frac{1}{16}$ to $\frac{1}{8}$ gr.	318
,, Arseniatis Liquor	5 to 10 minims	319
,, *Benzoas*		319
,, *Biboras. See* Borax		85
,, Bicarbonas	10 to 30 grs.	319
,, Bicarbonatis *Pessus*		320
,, ,, Trochisci	1 to 6 loz.	320
,, Bromidum	10 to 30 grs.	321
,, Carbonas	10 to 30 grs.	321
,, ,, exsiccata	3 to 10 grs.	321
,, Chloridum	Tonic, 10 to 60 grs. Cathartic, 2 to 4 drms.	322
,, Citro-tartras effervescens	1 to 2 drms.	323
,, *et Potassæ Tartras*		317
,, Ethylatis Liquor		323
,, *Hydras*		316
,, Hypophosphis		323
,, *Hyposulphis*		324
,, Iodidum	3 to 10 grs.	324
,, Nitras		324
,, *Nitris Purus*		325
,, Phosphas	$\frac{1}{4}$ to 1 oz.	325
,, *Pyroboras*		85
,, Salicylas		325

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SO	Dose.	Page
Sodii Sulphas	¼ to 1 oz.	326
,, Sulphis		326
,, Sulphocarbolas		327
,, *Taurocholas*		327
,, Valerianas	1 to 5 grs.	327
Sodium		315
Soft Soap		305
Solanum Dulcamara		150
,, *Vesicarium*		260
Solenostemma Argel		311
Soluble Cream of Tartar		283
,, *Tartar*		282
Soluté d'Iode Ioduré		206
Solute Hypochlorite de chaux		95
Solutio Acidi Bromohydrici		15
,, *Chloreti Ferri Spirituosa*		166
,, *Chlori*		118
,, *Ferri Bromidi*		161
,, *Hydrargyri Iodidi Rubri*		191
,, *Hydratis Calcici*		93
,, ,, *Kalici*		272
,, ,, *Natrici*		317
,, *Iodi Spirit*		207
,, *Nitratis Hydrargyrosi*		192
,, *Sodæ Hypophosphitis*		323
,, *solventis mineralis* (*De Valangin*)		7
,, *Subacetatis Plumbici*		270
Solutions (*group*)		221
Solution of Acetate of Ammonium	2 to 6 drms.	45
,, ,, ,, ,, Strong	20 to 60 minims	44
,, ,, ,, of Iron	5 to 30 minims	160
,, ,, ,, ,, Strong		160
,, ,, ,, Morphine	10 to 60 minims	236
,, ,, ,, ,, *for Hypodermic injection*		236
,, ,, Ammonia		43
,, ,, ,, Strong		43
,, ,, Arsenic (Liquor Arsenicalis)	2 to 8 minims	6
,, ,, ,, Hydrochloric	2 to 8 minims	6
,, ,, ,, and Iodide of Mercury		8
,, ,, *Arsenite of Ammonia*		7
,, ,, ,, *of Potash*		6
,, ,, Arseniate of Sodium		319
,, ,, *Bimeconate of Morphia* (*Squire*)		237, 253
,, ,, ,, Morphine		237
,, ,, *Bromide of Iron*		161
,, ,, *Bromohydric Acid*		15
,, ,, Chloride of Antimony		56
,, ,, ,, *of Arsenic*		7
,, ,, Chlorinated Lime		95

SO to SP	Dose.	Page
Solution of Chlorinated Soda		317
,, ,, Chlorine		118
,, ,, *Chloroxyde of Iron*		167
,, ,, Citrate of Ammonium		49
,, ,, ,, ,, Strong		48
,, ,, ,, ,, Magnesium		228
,, *De Valangin*		7
,, *de Phenate de Soude*		11
,, of Dialysed Iron		166
,, *Donovan's*		68
,, of Ethylate of Sodium		323
,, *Fowler's*		6
,, of Lime		92
,, ,, ,, Saccharated		93
,, *Lugol's*		207
,, Pernitrate of Iron		167
,, of Perchloride of Iron		166
,, ,, ,, ,, Strong		165
Soude Caustique		316
,, ,, *Liquide*		317
Soufre Précipité		335
,, *Sublimé Lavé*		336
Sous-acétat de Plomb Liquide		270
Spas of Europe		375
Spearmint Oil		233
,, Water		233
Specific gravities		xxiii
Spermaceti		114
Spirit, Clutton's Febrifuge		34
,, *Hoffman's Anodyne*		33
,, *of Hartshorn*		47
,, *of Salt*		15
,, *of Sal Volatile*		47
Spiritus (group)		328
,, Ætheris	30 to 60 minims	33
,, ,, Compositus	30 to 120 minims	33
,, ,, *Muriaticus*		34
,, ,, *Nitrici. See* Sp. Æth. Nitrosi		328
,, ,, Nitrosi	½ to 2 drms.	328
,, Ammoniæ Aromaticus	20 to 60 minims	47
,, ,, Fœtidus	½ to 1 drm.	44
,, *Ammonii Anisatus*		47
,, Armoraciæ compositus	1 to 3 drms.	66
,, Cajuputi	50 to 100 minims	90
,, Camphoræ	10 to 30 minims	100
,, ,, *Fortior*		100
,, Chloroformi	10 to 60 minims	120
,, Cinnamomi	1 to 2 drms.	128
,, *Citri*		218

[illegible]	33
[illegible]	11
[illegible]	[illegible]
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[illegible]	[illegible]
[illegible]	[illegible]
[illegible]	[illegible]
[illegible]	[illegible]
[illegible]	330
[illegible]	298
[illegible]	47
[illegible]	34
[illegible]	314
[illegible]	330
[illegible]	330
[illegible] 1 to 9 oz.	331
[illegible]	10
[illegible]	291
[illegible]	[illegible]
[illegible]	[illegible]
[illegible]	[illegible]
[illegible]	[illegible]
[illegible]	32
[illegible]	[illegible]

SU	Dose.	Page
Subcarbonate of Potash		276
Subchloride of Mercury		196
Sublimate Wood Wool		196
Sublimatus Corrosivus		195
Sublimatum Corrosivum		195
Sublimed Sulphur		336
Subnitras Bismuthi		83
,, *Bismuthicus*		83
Subnitrate of Bismuth		83
Succi (group)		335
Succini Oleum		335
,, *Tinctura*		335
Succus *Aconiti*		29
,, Belladonnæ		77
,, Conii	30 to 60 minims	136
,, *Digitalis*		149
,, Hyoscyami	½ to 1 drm.	200
,, *Lactucæ*		215
,, Limonis	½ to 2 oz.	218
,, Mori		235
,, Scoparii	1 to 2 drms.	310
,, Taraxaci	1 to 2 drms.	342
Sucre de Lait		300
,, *Canne*		300
Sucrose		300
Suet, Prepared		313
Sugar, Refined		300
,, *of Lead*		266
,, of Milk		300
Suif de Mouton		313
Sulfate de Potasse		282
,, ,, *Zinc*		358
,, *Mercurique*		196
Sulfure de Potassium Solide		274
Sulphas Chinicus		290
,, *Kalicus*		282
,, *Magnesicus*		228
,, *Potassæ*		282
,, *Natricus*		226
,, *Zincicus*		358
Sulphate of *Aluminium and Ammonium*		40
,, ,, ,, ,, *Potassium*		40
,, ,, Atropine		70
,, ,, Beberine		75
,, ,, Calcium		94
,, ,, Cinchonidine		127
,, ,, Cinchonine		127
,, ,, Copper		145
,, ,, *Duboisine*		150
,, ,, *Hyoscyamine*		201

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SU	Dose.	Page
Sulphate of Iron		170
,, ,, *Lime*		94
,, ,, Magnesium		228
,, ,, *Mercury*		196
,, ,, Morphine		239
,, ,, *Nickel*		243
,, ,, Potassium		282
,, ,, Quinine	1 to 5 grs.	288
,, ,, Sodium		326
,, ,, Zinc		357
,, ,, ,, *fused sticks of*		358
Sulphide of Antimony		58
,, ,, *Calcium*		96
Sulphite of Sodium		326
Sulpho-carbolates		12
Sulpho-carbolate of Sodium		327
,, Zinc		358
Sulphur		335
Sulpho-carbolic Acid		12
,, præcipitatum	20 to 60 grs.	335
,, sublimatum	Stimulant, 10 to 20 grs. Laxative, 20 to 60 grs.	336
Sulphurated Antimony		58
,, Lime		96
,, Potash		273
Sulphuret of Antimony, Prepared		58
Sulphuretum Potassii Officiale		274
Sulphuric Acid		24
,, ,, Aromatic		25
,, ,, Diluted		25
,, ,, *Monohydrated*		24
,, *Ether*		32
Sulphuris Confectio	1 to 2 drms.	336
,, Iodidi Unguentum		337
,, Iodidum		336
,, *Lac*		336
,, *Trochisci Comp.*		336
,, Unguentum		336
Sulphurous Acid	½ to 1 drm.	26
,, ,, *Gargle*		26
,, ,, *Lotion*		26
,, ,, *Spray*		26
Sumbul Radix		337
Sumbul Tinctura	15 to 30 minims	337
Suppositoria, not official (group)		372
Suppositoria, official (group)		338
,, Acidi Carbolici c. Sapone	contain 1 gr. each	11
,, ,, Tannici	contain 3 grs. each	27
,, ,, ,, c. Sapone	contain 3 grs. each	27
,, ,, ,, *c. Opio*		28
,, ,, ,, *Vaginal*		28

Official Names in Roman; all others in Italics.

SU to SY	Dose.	Page
Suppositoria *Belladonnæ*	contain 1 gr. each	79
,, *Gallæ*		176
,, *Gummi Rubri*		185
,, Hydrargyri	5 grs. Ointment in each	190
,, Iodoformi	contain 3 grs. each	205
,, *Krameriæ*		214
,, Morphinæ	½ gr. in each	238
,, ,, c. Saponè	½ gr. in each	238
,, Plumbi comp.	3 grs. Acet. Lead in each 1 gr. Powdered Opium	267
Suppositories, Urethral (group)		373
,, *Vaginal* ,,		373
Sus Scrofa		31
Swan's Solution		323
Sweet Almond		51
Sydenham's Laudanum		253
Symbols		xxxvi
Symphyti Radix		338
Syrup of Dikinate of Quinia		290
Syrupi (group)		339
Syrupus		300
,, *Acidi Citrici*		14
,, Aurantii	1 to 2 drms.	71
,, ,, Floris	1 to 2 drms.	72
,, *Calcis Hypophosphitis*		94
,, ,, *Lactophosphatis*		18
,, Chloral		118
,, *Codeinæ*		131
,, *Diacodii*		255
,, Ferri *Bromidi*		161
,, ,, Iodidi	20 to 60 minims	164
,, ,, Phosphatis	1 to 4 drms.	169
,, ,, ,, *comp., Parrish*		169
,, ,, ,, *c. Manganesio*		170
,, ,, ,, *c. Quiniâ et Strychniâ, Easton's*		169
,, *Gummi Rubri*		185
,, Hemidesmi	1 to 2 drms.	188
,, *Ipecacuanhæ*		209
,, *Lactucarii*		215
,, Limonis	1 to 2 drms.	218
,, Mori	1 to 2 drms.	235
,, *Morphinæ*		253
,, Papaveris	1 drm.	255
,, ,, *Rhœados*		295
,, *Pruni Virginianæ*		285
,, *Quininæ Dikinatis*		290
,, ,, *Hydriodatis*		291
,, Rhei	1 to 4 drms.	294
,, ,, *Aromat.*		294
,, ,, *Comp.*		294

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SY to TA	Dose.	Page
Syrupus Rhœados	1 to 2 drms.	295
,, Rosæ Gallicæ	1 to 2 drms.	297
,, *Rutæ*		299
,, Scillæ	½ to 1 drm.	309
,, *Senegæ*		310
,, Sennæ	1 to 2 drms.	312
,, Tolutanus	1 to 2 drms.	74
,, *Trifolii*		348
,, Zingiberis	1 to 4 drms.	359
Tabaci Folia		340
Tabella Catechu		112
,, Nitroglycerini		243
Table of Alcohol in Wines		331
,, ,, *Materia Medica*		xxiv
Tamarindus	¼ oz.	340
,, *Indica*		340
Tannate of Pelletierine		183
Tannic Acid	2 to 10 grs.	26
,, ,, Glycerine of		27
,, ,, Lozenges		28
,, ,, *Ointment*		28
,, ,, ,, *with Opium*		28
,, ,, *Pessary*		28
,, ,, Suppositories		27
,, ,, *with Opium*		28
,, ,, ,, with soap		27
Tapeworm Remedy		183
Tar		265
,, *Capsules*		266
,, Ointment		266
,, *Pills*		266
,, *Water*		266
Taraxaci Decoctum	2 to 4 oz.	341
,, Extractum	5 to 15 grs.	341
,, ,, Liquidum	15 to 160 minims	342
,, Radix		341
,, Succus	2 to 4 drms.	342
Taraxacum Officinale		341
Tartar, Cream of		283
,, ,, *Soluble*		283
,, *Emetic*		58
,, *Soluble*		282
Tartarated Antimony		58
,, Iron		172
,, Soda		317
Tartari Stibiati Unguentum		59
Tartaric Acid		28
Tartarus Boraxatus		283
,, *Depuratus*		283
,, *Natronatus*		317

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Tartarus Stibiatus		59
Tartras Antimonico Potassicus		59
,, *Ferrico-Kalicus*		173
,, *Kalicus*		283
,, *Natrico-Kalicus*		317
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,, ,, *et Ferri*		173
,, *Sodico-Potassicus*		317
,, *Stibico-Kalicus*		59
Tartrate of Antimony and Potash		58
,, *d'Antimoine et de Potasse*		59
,, *Borico-Potassique*		283
,, *Ferrico-Potassique*		173
,, *of Morphine*		239
,, *de Potasse et de Soude*		317
,, of Potassium		282
,, *de Potasse Acide*		283
,, ,, *Neutre*		283
,, *of Soda and Potash*		317
Taurocholate of Sodium		327
Teinture Balsamique		79
,, *de Camphré Conc*		100
,, *d'Essence de Menthe*		233
,, *de Noix Vomique*		245
,, *de Quinquina*		126
,, *de Raifort Comp.*		66
Terchloride of Formyl		119
Terebene		342
,, *Capsules*		342
Terebinthina Canadensis		342
Terebinthinæ *Ætheroleum*		343
,, Confectio	1 to 4 drms.	343
,, Enema		343
,, *Essentia*		343
,, Linimentum		343
,, ,, Aceticum		343
,, Oleum	10 to 30 minims	342
,, Unguentum		344
Testing, Articles employed in		360
,, *Solutions for*		362
,, *Volumetric*		365
Tetrachloride of Carbon		121
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Theobroma Cacao		344
Theobromatis Oleum		344
Theriaca		344
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TH to TI	Dose.	Page
Thus Americanum		344
Thymol		345
Thymolum		345
Thymus Vulgaris		345
Tiglii Oleum		144
Tincturæ (group)		346
Tinctura Aconiti	5 to 15 minims	30
,, *Actææ Racemosæ*		31
,, Aloes	1 to 2 drms.	38
,, ,, *Composita*		39
,, *Ammon. composita*		44
,, *Anisi*		55
,, Arnicæ	½ to 1 drm.	67
,, Asafœtidæ	½ to 1 drm.	69
,, Aurantii	1 to 2 drms.	71
,, *Aurant. Dulc.*		71
,, ,, Recentis	1 to 2 drms.	71
,, Belladonnæ	5 to 20 minims	77
,, *Benzoini*		79
,, ,, composita	½ to 1 drm.	79
,, *Boldo*		84
,, Buchu	1 to 4 drms.	87
,, *Cachou*		112
,, Calumbæ	½ to 2 drms.	97
,, Camphoræ composita	15 to 60 minims	100
,, Cannabis Indicæ	5 to 20 minims	102
,, Cantharidis	5 to 20 minims	104
,, Capsici	10 to 20 minims	105
,, ,, *Conc. (Turnbull)*		105
,, Cardamomi composita	½ to 2 drms.	107
,, ,, *Simplex*		107
,, Cascarillæ	½ to 2 drms.	109
,, *Castorei*	½ to 1 drm.	110
,, Catechu	½ to 2 drms.	111
,, *Chinæ*		126
,, ,, *Calisayæ*		126
,, ,, *Comp.*		126
,, ,, *Flav.*		126
,, ,, *Rubræ*		126
,, Chiratæ	½ to 2 drms.	117
,, Chloroformi composita	20 to 60 minims	120
,, ,, et Morphinæ	5 to 10 minims	120
,, *Cicutæ. See* Tinctura Conii		137
,, Cimicifugæ	15 to 60 minims	122
,, Cinchonæ	½ to 2 drms.	126
,, ,, composita	½ to 2 drms.	126
,, ,, *Huxham's*		126
,, Cinnamomi	½ to 2 drms.	128
,, Cocci	30 to 90 minims	130
,, Colchici Seminis		133

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TI	Dose.	Page
Tinctura *Colchici Florum*		133
„ „ Seminum	10 to 30 minims	133
„ *Colocynthidis*		135
„ Conii	20 to 60 minims	137
„ Croci	½ to 2 drms.	143
„ Cubebæ	½ to 2 drms.	145
„ Digitalis	10 to 30 minims	149
„ *Diosmæ*		87
„ Ergotæ	5 to 30 minims	154
„ Ferri Acetatis	5 to 30 minims	160
„ „ *Acetici Æther*		160
„ „ *Chlorati*		166
„ „ *Chloridi*		166
„ „ *Muriatis*	10 to 30 minims	166
„ „ Perchloridi		
„ „ *Sesquichloridi*		
„ Gallæ	½ to 2 drms.	176
„ Gelsemii		177
„ *Gentianæ*		178
„ „ composita	½ to 2 drms.	178
„ *Gossypii Radicis*		182
„ *Guaiaci*		184
„ „ Ammoniata	½ to 1 drm.	184
„ *Guaranæ*		185
„ *Gummi Rubri*		185
„ *Hamamelis*		187
„ *Hellebori Nigri*		187
„ *Hydrastis*		199
„ Hyoscyami	15 to 60 minims	200
„ „ *Radicis*		201
„ „ *Recentis*		201
„ Iodi	5 to 20 minims	207
„ „ *Decolorata*		207
„ *Ipecacuanhæ*		209
„ Jaborandi	30 to 60 minims	210
„ Jalapæ	½ to 2 drms.	211
„ „ *Resinæ*		211
„ *Kamalæ*		213
„ Kino	½ to 2 drms.	213
„ Krameriæ	½ to 2 drms.	214
„ *Lactucarii*		215
„ Laricis	20 to 30 minims	216
„ Lavandulæ composita	½ to 2 drms.	217
„ „ *Rubr.*		217
„ Limonis	½ to 2 drms.	218
„ Lobeliæ	10 to 30 minims	224
„ „ Ætherea	10 to 30 minims	224
„ Lupuli	½ to 2 drms.	225
„ *Lupulinæ*		225
„ *Lyttæ. See* Canthar.		104

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Tinctura *Maticæ*		231
,, *Moschi*		241
,, Myrrhæ	½ to 1 drm.	242
,, ,, *et Boracis*		86
,, Nucis Vomicæ	10 to 20 minims	245
,, Opii	5 to 40 minims	251
,, ,, Ammoniata	½ to 1 drm.	252
,, ,, *Benzoica*		100
,, ,, *Camphorata*		100
,, ,, *Crocata*		252
,, *Physalis Alkakengi*		260
,, *Physostigmatis*		261
,, Podophylli	15 to 30 minims	271
,, ,, *Ammoniata*		271
,, Pyrethri		285
,, Quassiæ	1 to 2 drms.	286
,, *Quillayæ Saponariæ*		287
,, Quininæ	1 to 1½ drms.	288
,, ,, Ammoniata	1 to 2 drms.	290
,, Rhei	Stom. 1 to 2 drms. Purgative, ½ to 1 oz.	294
,, ,, *Vinosa*		295
,, Sabinæ	15 to 60 minims	299
,, Scillæ	10 to 30 minims	309
,, Senegæ	½ to 2 drms.	310
,, Sennæ	1 to 4 drms.	312
,, Serpentariæ	½ to 2 drms.	312
,, Stramonii	10 to 30 minims	333
,, *Strychni*		245
,, ,, *Ether*		245
,, *Strychninæ*		334
,, *Succini*		335
,, Sumbul	10 to 30 minims	337
,, *Thebaica*		253
,, ,, *Benzoica*		100
,, Tolutana	15 to 60 minims	75
,, Valerianæ	1 to 2 drms.	351
,, ,, Ammoniata	½ to 1 drm.	351
,, ,, *Ætherea*		351
,, Veratri Viridis	5 to 20 minims	353
,, *Warburghii*		291
,, *Whyttii*		126
,, Zingiberis	10 to 30 minims	359
,, ,, fortior	5 to 20 minims	359
Tinnivelly Senna		311
Tisane d'Oranger		71
,, *d'Orge*		188
,, *de Polygala*		310
,, *de Ratanhie*		214
,, *de Valeriane*		351
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Tolu Balsam			74
Toughened Caustic			65
,, Nitrate of Silver			65
Tragacantha		20 grs.	347
Tragacanthæ Glycerinum			348
,, Mucilago		1 oz.	348
,, Pulv. comp.		10 to 60 grs.	348
Traumatic Balsam			79
Traumaticine			186
Treacle			344
Trifolii Syrupus			348
Tritici Repentis Decoctum			348
Triticum Sativum			52, 158
Trochisci (group)			349
,, Acidi Benzoici		1 to 5 lozenges	8
,, ,, Tannici	½ gr. in each	1 to 6 lozenges	28
,, *Aconiti*			30
,, *Ammonii Bromidi*			46
,, ,, *Chloridi*			48
,, Bismuthi	2 grs. in each	1 to 6 lozenges	83
,, Catechu	1 gr. in each	1 to 6 lozenges	112
,, Ferri Redacti	1 gr. in each	1 to 6 lozenges	172
,, *Gummi Rubri*			185
,, Ipecacuanhæ	¼ gr. in each	1 to 3 lozenges	208
,, ,, et Morphinæ			209
,, *Krameriæ*			214
,, Morphinæ	$\frac{1}{36}$ gr. in each	1 to 2 lozenges	238
,, ,, et Ipecac.		1 to 2 lozenges	239
,, Opii	$\frac{1}{10}$ gr. Ext.	1 to 2 lozenges	252
,, Potassæ Chloratis	5 grs. in each	1 to 6 lozenges	277
,, Santonini			303
,, Sodii Bicarb.	5 grs. in each	1 to 6 lozenges	320
,, *Sulphuris Comp.*			336
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Turpentine Oil			342
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Unguentum Acidi Borici			8
,, ,, Carbolici			11
,, ,, *Chrysophanici*			122
,, ,, *Gallici*			15
,, ,, *Pyrogallici*			23
,, ,, *Salicylici*			24
,, ,, *Tannici*			28
,, ,, ,, *c. Opio*			28
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,, *Chloroformi* . . . 121
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,, ,, *Album* . . . 198
,, ,, *c. Ammoniæ Muriate* . . . 190
,, ,, Ammoniati . . . 198
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,, ,, Nitratis . . . 192
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,, Picis Liquidæ		266
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,, ,, Acetatis		267
,, ,, Carbonatis		268
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,, Ursi Folia	10 to 30 grs.	350
,, ,, Infusum	1 to 2 oz.	351
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Valerianæ Infusum	1 to 2 oz.	351
,, Rhizoma	10 to 30 grs. powder	351
,, Tinctura	1 to 2 drms.	351
,, ,, Ammoniata	½ to 1 drm.	351
,, ,, *Ætherea*		351
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Veratri Viridis Rhizoma	4 to 6 grs.	352
,, ,, Tinctura	5 to 20 minims	353
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Vin Chalybé		163
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Vinaigre Anglaise		5
,, *des Quatre Voleurs*		5
Vinca Major		354
Vincæ Majoris Extract. Liquid.		354
,, ,, *Infusum*		354
Vinegar	1 to 2 drms.	2
,, *Aromatic*		5
,, *Camphorated*		100
,, *of Four Thieves*		5
Vinum Aloes	1 to 2 drms.	39
,, Antimoniale	5 to 30 minims	59
,, *Antimoniatum*		59
,, *Antimonii*		59
,, Aurantii		72
,, Colchici	10 to 30 minims	132
,, ,, *Seminum*		133
,, Ferri	1 to 4 drms.	173
,, ,, Citratis	1 to 4 drms.	163
,, Ipecacuanhæ.	Expectorant, 5 to 40 minims. Emetic, 3 to 6 drms.	209
,, Opii	10 to 40 minims	252
,, Quininæ	½ to 1 oz.	290
,, Rhei	1 to 2 drms.	295
,, *Seminum Colchici*		133
,, *Stibiatum*		59
,, *Stibiato-Tartaricum*		59
,, *Stibio-Kali Tartarici*		59
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,, Wax		113
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Zanaloin		39
Zea Mays		52
Zinci Acetas	1 to 2 grs.	354
,, *Acetatis Lotio*		355
,, *Bromidum*		355
,, Carbonas	2 to 10 grs.	356
,, ,, *Præcipitatus*		355
,, Chloridum	½ to 1 gr.	355
,, Chloridi Liquor		356
,, ,, *Points*		356
,, Oleati Unguentum		21
,, Oleatum		21

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ZI	Dose.	Page
Zinci Oxidum	2 to 10 grs.	356
,, Sulphas	Tonic, 1 to 2 grs. Emetic, 10 to 30 grs.	357
,, Sulphocarbolas		358
,, Unguentum		357
,, Valerianas	1 to 6 grs.	358
Zincum		354
,, *(group)*		354
,, *Chloratum*		356
,, Granulatum		354
,, *Sulphocarbolicum*		358
,, *Sulphuricum*		357
Zingiber	10 to 20 grs.	359
,, *officinale*		359
Zingiberis *Essentia*		359
,, *Oleoresina*		359
,, *Rhizoma*		359
,, Syrupus	1 to 4 drms.	359
,, Tinctura	10 to 30 minims	359
,, ,, fortior	5 to 20 minims	359

ZI	Dose.	Page
Zinci Oxidum	2 to 10 grs.	356
,, Sulphas	Tonic, 1 to 2 grs. Emetic, 10 to 30 grs.	357
,, Sulphocarbolas		358
,, Unguentum		357
,, Valerianas	1 to 6 grs.	358
Zincum		354
,, *(group)*		354
,, *Chloratum*		356
,, Granulatum		354
,, *Sulphocarbolicum*		358
,, *Sulphuricum*		357
Zingiber	10 to 20 grs.	359
,, *officinale*		359
Zingiberis *Essentia*		359
,, *Oleoresina*		359
,, *Rhizoma*		359
,, Syrupus	1 to 4 drms.	359
,, Tinctura	10 to 30 minims	359
,, ,, fortior	5 to 20 minims	359

WORKS BY THE SAME AUTHOR.

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THE PHARMACOPŒIAS

OF

TWENTY-FIVE OF THE

LONDON HOSPITALS,

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